

**INFORMATION COMMUNICATION TECHNOLOGIES AS A
SUPPORT MECHANISM FOR LEARNERS EXPERIENCING
READING DIFFICULTIES**

by

RAMASHEGO SHILA SHORTY MPHAHLELE

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Supervisor: Prof N.M. Nel

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DECLARATION

Student number: 33130930

I declare that **INFROMATION COMMUNICATION TECHNOLOGIES AS A SUPPORT MECHANISM FOR LEARNERS EXPERIENCING READING DIFFICULTIES** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

SIGNATURE
(Ms)

NOVEMBER 2013
DATE

DEDICATION

This work is dedicated to my late grand-mother, Salome Malope Malekane who travelled to the small town of Groblersdal in 1991 to buy me a scientific calculator. She didn't know it and how to pronounce it but she came back with the right one.

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ABSTRACT

Reading Difficulties are of concern worldwide, as evidenced by a number of studies, including the Association for the Development of Education in Africa (ADEA), the Centre for Evaluation & Assessment (CEA), and Progress in International Reading Literacy (PIRLS). In South Africa's, Gauteng Province, in which this study was conducted, the Department of Education (DoE) launched campaigns, such as Foundations for Learning (FFL) and Annual National Assessment (ANA) to address this problem. The purpose of this study was to explore, explain and describe the use of Information Communication Technologies (ICTs) to support learners experiencing reading difficulties in two public primary schools. The study was influenced by Vygotsky's socio-cultural theory of human learning that describes it as a social process and the origination of human intelligence in society or culture. It comprised skills, assumptions and practices that the researcher used when moving from paradigm to the empirical world. A qualitative approach was used to gain first-hand holistic understanding of the use of ICTs to support learners experiencing reading difficulties, with data collected using focus group interviews, individual interviews and observations. Participants were 18 members of the School Based Support Team (SBST) and two Learning Support Educators (LSEs) of the two selected primary schools. The use of ICTs as a support mechanism was explored, with a detailed view presented on the use of ICTs by the teachers during teaching and learning activities and how they supported learners experiencing reading difficulties. From the research findings, factors affecting learners experiencing reading difficulties were identified, including lack of resources (specifically ICTS) and lack of guidelines on identifying and providing support to the learners experiencing reading difficulties. Based on the findings, conclusions and recommendations were made and the researcher developed guidelines which could be used by teachers to provide ICTs support for learners with reading difficulties.

Key concepts: Information communication technologies, reading, reading difficulties, support mechanism, school- based support team, learning support, e-Learning and barriers to learning.

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LIST OF ABBREVIATIONS AND ACRONYMS

The following abbreviations and acronyms are used in this study:

ANA	Annual National Assessment
ADEA	Association for the Development of Education in Africa
CEA	Centre for Evaluation & Assessment
DOE	Department of Education
EFA	Education for All
EWP6	Education White Paper 6
FFL	Foundations for Learning
GDE	Gauteng Department of Education
HSRC	Human Science Research Council
ICTs	Information Communication Technologies
IDEA	Individuals with Disability Education Act
IEA	International Association for Evaluation
ISS	Inclusion and Special Schools
LOLT	Language of Learning and Teaching
LSEN	Learners with Special Educational Needs
LSE	Learning Support Educator
MDGs	Millennium Development Goals
NCLB	No Child Left Behind
NCS	National Curriculum Statement
NICHD	National Institute for Child Health Development
NRC	National Research Council
NRP	National Reading Panel
PIRLS	Progress in International Reading Literacy
RTI	Response to Intervention
SBST	School Based Support Team

SIAS	Screening, Identification, Assessment and Support
SITES	Second International Technology in Education Study
SMS	Short Message System
TTS	Text to Speech
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNISA	University of South Africa

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CHAPTER 1

INTRODUCTION TO THE RESEARCH

1.1. INTRODUCTION

Reading difficulties constitute a worldwide phenomenon, as confirmed by a study by Easton (2007:1) conducted in 50 countries in sub-Saharan Africa in 2006. According to the Association for the Development of Education in Africa (ADEA), some countries, such as Botswana, Mauritius and South Africa, have achieved adult literacy rates over 75%, due to reading difficulties experienced among learners. ADEA is an organisation established by the World Bank in 1988 to foster collaboration and coordination between development agencies and African ministries of education. In Europe, the *British Journal of Education Psychology* (2008) conducted a study of 118 primary schools which indicated that at least one in five children in Europe could not read properly.

According to the Centre for Evaluation and Assessment (Howie, 2006:3), statistics released by the United Nations Educational, Scientific and Cultural Organization (UNESCO) showed that from 860 million people who participated in the United Nations Literacy Decade for 2003 to 2012, 20% of adults could not read or write or participate fully or optimally in the organisation and activities of their societies. Of these illiterate adults, 70% lived in Sub-Saharan Africa, Southern and Western Asia, Arab countries and North Africa.

Progress in International Reading Literacy (PIRLS) also conducts comparative evaluation of reading literacy of Grade 4 (9 year old) learners involving 40 countries. PIRLS is an international study of reading literacy which is conducted every five years and examines the processes of comprehension as well as purposes for reading. These two aspects do not function in isolation from each other, and they form the basis of the written test of reading comprehension. According to the PIRLS Assessment Framework and specifications for the 2011 study, readers construct meaning in different ways when faced with the task of reading (Howie, van Staden, Tshele, Dowse & Zimmerman, 2012). They focus on and retrieve specific ideas, make inferences, interpret and integrate information and ideas as well as evaluate and examine text features. In PIRLS's 2011 study, South Africa was among 40 countries which participated and the results indicated that 61% of learners could not read or write at the appropriate level for their age.

In South Africa, reading difficulties have also been experienced. As a result, in 2010 and 2011, the Department of Education (DoE) conducted two national systemic evaluations to establish literacy and numeracy levels in primary schools. These surveys showed shockingly low levels of reading ability across the country. The levels as captured in the systemic evaluation national report (2011) were, as shown on figure 1.1 below.

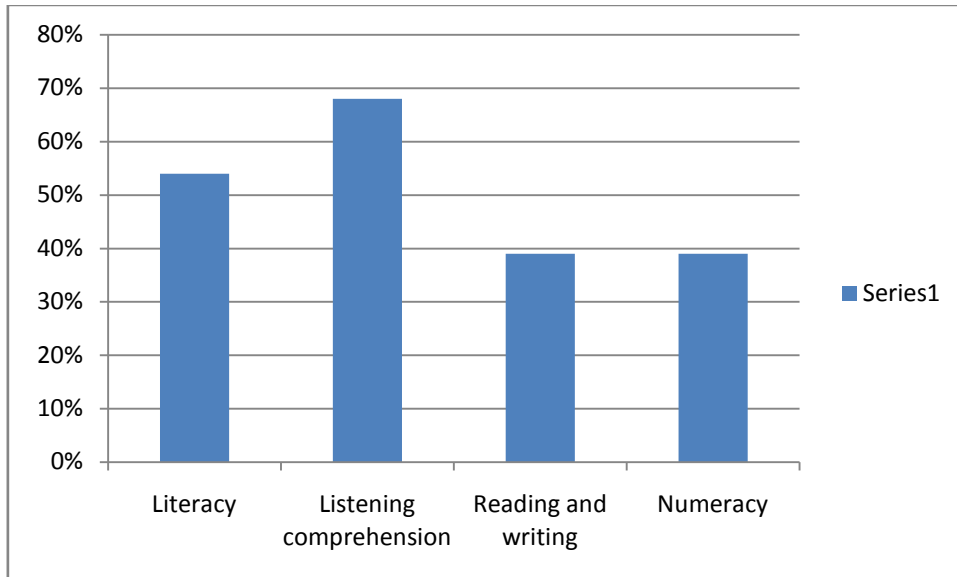


Figure 1.1: Literacy and numeracy levels of South African primary school learners (2011)

The above figure illustrates the reading levels as follows: Literacy - 54%, Listening Comprehension - 68%, Reading and Writing - 39%; and Numeracy - 30%. The national report also indicated that the scores obtained by learners within the different provinces were similar.

Other studies conducted in the country indicated that the poor state of development in reading skills of South African learners has slowly become evident over the last few years as teachers, parents, employees and professionals are confronted with the continuing crisis. The DoE (2008) stated that the South African youth do not read as well as their foreign counterparts and that they are amongst the poorest readers in the world (Howie, 2007).

(Gunning (2010: 2) defines 'reading difficulties' as problems with reading, citing an example of an averagely intelligent fourth-grader who received four years of formal instruction in reading, yet reading at an early first-grade level. Champman and Tunmer (2003: 6) also define reading difficulties as those associated with problems in learning to

read. Bond, Tinker, Wason and Wason (1989: 10), on the other hand, view reading difficulties as the result of unrecognised, pre-disposing conditions, within the child, which are caused by elements of the environment at home, play, and at school. They further indicate that without appropriate guidance or proper instruction the learner will fail to acquire the skills needed to develop normal reading ability. Based on the above definitions the researcher views reading difficulties as difficulty with fluency and comprehension of reading, which may be caused by environmental or physical factors, or from a combination of both.

Learners experiencing reading difficulties can experience problems in achieving the basic literacy/language learning outcomes, which are listening, speaking, writing of language and reading (Little, Akin-Little, & Richards, 2006: 368-376). As a result, learners tend to be excluded from the learning process, due to lack of proper learning support. Education White Paper 6 (EWP6) encourages teachers to implement inclusive education, defining it as a process that enables education structures, systems and learning methodologies to address the barriers of all learners. (DoE, 2001: 16). It further indicates that it is an acknowledgement that all children and youth can learn and that they all need support. Supporting EWP6 are Bornman and Rose (2010: 6), for whom inclusive education is about addressing barriers to learning, described in detail in section 1.13 (below). In the light of the above definitions, it can be viewed as accepting and respecting that all learners are different in some way and have different learning barriers, to be equally valued.

In response to the aforementioned concerns, the DoE developed a National Reading Strategy as part of addressing the national crisis of reading difficulties. The educational goals in relation to this were to promote reading across the curriculum, to put reading firmly on the school agenda and to encourage reading for enjoyment and ensure that the broader community understand their role in improving and promoting it. The National Reading Strategy (2008: 4) states that every South African has a responsibility to be involved in the national effort to combat illiteracy. In developing this National Strategy for Reading, South Africa was participating in a number of United Nations development campaigns, including the UNESCO Literacy Decade 2003-2013, and the Education for All (EFA) campaign, which aims to increase literacy rates by 50% by the year 2015. (DoE, 2008: 11).

Underpinning these campaigns are the Millennium Development Goals (MDGs), which in short can be explained as an ambitious agenda for reducing poverty and improving lives that world leaders agreed on at the Millennium Summit in September 2000, and set to achieve before the end of 2015. The relevance of MDGs to this study is goal number two, to “achieve universal primary education”. According to the DoE (2008: 11), this goal will be achieved through promoting reading across the curriculum; putting reading firmly on the school agenda; encouraging reading for enjoyment; and ensuring that the broader community understands its role in improving and promoting reading.

Reading difficulties persist, despite various interventions and strategies mentioned above, as well as those used by teachers to address reading difficulties, such as Response to Intervention (RTI); VAKT/Fernald tracing technique; the Orton-Gillingham-Stillman method; some remedial programmes such as DISTAR; ICT interventions such as Binocular Visual Skills and electronic talking books used to focus on reading for meaning or specific reading skills (Power, 2006).

However, a study by van Wyk and Louw (2008: 245-254) highlights the success of the use of a Technology Assisted Reading Programme. Although this was the case, the researchers and authors did not consider other technologies that formed part of the Information Communication Technologies (ICTs), as they only considered computers and thus it was necessary also to consider other forms of ICTs. Reynolds and Nicolson (2006: 81) referred to an exercise-based support mechanism for learners with reading difficulties, and other ICTs, and indicated its success in supporting learners experiencing reading difficulties. The benefit of the use of ICTs in teaching and learning is also emphasised by Chigona, Chigona, Kayongo and Kausa (2010).

In view of the above, the researcher is convinced that ICTs, especially in this day and age of technology, are of utmost important as a support mechanism for learners experiencing reading difficulties as they are already exposed to technology at a very early age. ICTs include computers, the Internet, broadcasting technologies (radio and television), and telephony.

Globally, ICTs have become a key driver in culture, economics, politics and education, with profound effects on all countries, which in turn affect people in the most remote and least developed areas, even if they are not directly using the technologies (Anderson,

N.2009: 1). Farrell and Shafika (2007: 5-8) reported on South Africa, Namibia, Senegal, Mali, Cameroon and Nigeria's salient feature of national ICTs and ICTs for education policies. According to the Information Development Organisation (InfoDev.org), Ghana, Kenya, and Uganda are a few examples of countries that promote computer science or information technology as a school-based subject, in addition to the access, use, and integration of ICTs within their school systems. However, ICT use is not directly linked to supporting learners experiencing reading difficulties, and this is a concern for the researcher, considering the importance and impact it can have on the acquisition of literacy and to prevent or overcome reading difficulties, which in turn affects all other areas of learning.

1.2. RATIONALE

Having worked as a teacher for more than ten years in different schools, both in Gauteng and Limpopo province, the researcher observed that most learners experience reading difficulties. Currently, the researcher is employed as a Senior Education Specialist in Gauteng Department of Education (GDE) at Tshwane South District, in the Inclusion and Special Schools (ISS) unit. The role involves capacitating educators to support learners experiencing barriers to learning and learners with disabilities. For the purpose of this study, the researcher focuses on learners experiencing barriers to learning, specifically reading difficulties. Teachers identify learners experiencing barriers to learning and fill in GDE support forms, formerly known as GDE 450 support forms. These are initiated by the GDE for educators to fill in with information about learners experiencing barriers to learning. The forms indicate the identified barriers, interventions by the teacher and the outcomes of the intervention. They then refer the learners to the Institution Level Support Team (ILST), formerly known as the School Based Support Team (SBST) for support. Because the term SBST is still used in schools the researcher opted to use it instead of ILST (see section 1.13).

SBST members will then fill in the ISS referral forms and attach the GDE support forms filled in by the teacher to refer the learners to the Learning Support Educators (LSEs), who will also provide support to the SBST. If the support or intervention of the LSEs does not bring positive outcomes then learners are referred to the District Office for placement either in a special school (for learners with severe barriers to learning) or Full Service

Schools (for learners with moderate barriers to learning). The above-outlined process is known as the ‘referring procedure’.

The researcher’s encounters with referrals pertaining to barriers to learning indicated that reading difficulties constitute the highest frequency barrier learners experience in the public primary schools. During the first and second term of 2010 the researcher received 200 ISS referral forms, with GDE support forms attached to them. Out of two hundred GDE support forms handled the outcomes indicated that about 150 learners experienced reading difficulties, despite the training and workshops that teachers attend to help them support learners experiencing reading difficulties. This was also evident in the Human Science Research Council (HSRC) Review, Volume 6, No. 2, June 2008, where it states that South African learners score poorly in mathematics and language tests when compared with those from other African countries, and when compared with what should be expected 14 years after the inception of democracy.

The researcher identified a gap in terms of support mechanisms used by authors mentioned in the introduction to support learners experiencing reading problems. However, the need for teachers to be trained particularly on the use of ICTs was identified, which led to the problem statement outlined below.

1.3. PROBLEM STATEMENT

The problem statement is outlined in relation to the significance that the use of ICTs serve as a learning support mechanism for learners with reading difficulties in the intermediate phase. This study seeks to address the following research question and two sub-questions

1.3.1 Main question

- What significance can the use of ICTs have as a learning support mechanism for learners with reading difficulties in the intermediate phase?

1.3.2 Sub-questions

- In which way do teachers use ICTs as a support mechanism for learners with reading difficulties?
- Can teachers’ learning support experiences be used to develop guidelines for teachers who use ICTs as support mechanism for learners with reading difficulties?

1.4. AIM OF THE STUDY

The aim of this study is to explore, explain and describe the use of ICTs to support intermediate phase learners experiencing reading difficulties in two public primary schools.

The following are the anticipated outcomes for this study:

- For learners to be able to read fluently with comprehension by establishing the ICTs reading support mechanisms to be used by teachers in the intermediate phase of the two selected schools
- Reduction of reading difficulties in primary schools by developing ICTs guidelines which could be used by teachers to provide ICTs support for learners with reading difficulties in the intermediate phase.

1.5. THEORETICAL FRAMEWORK

This study is influenced by socio-cultural theory which has its roots in the work of Vygotsky, whose socio-cultural theory of human learning describes learning as a social process and the origination of human intelligence in society or culture (Vygotsky, 1978: 56-58). The major theme is that social interaction plays a fundamental role in the development of cognition. Vygotsky believed that everything is learned on two levels, first, through interaction with others, and second through integration into the individual's mental structure (Kozulin 2005: 105). The other important aspect in the theory that makes it more relevant to this study is that the theory regards language as a tool for thought, a means of mediation in mental activity and an invention used for achieving the goals of social living (Kozulin, 2003: 27). Language is one of the most important elements of reading and it is discussed in detail in section 2.5.1 of chapter two.

Supporting this theory is Lapp, Flood, Brock and Fisher, (2007: 14), who wrote that, learning, or the development of the human mind, originates first through effective interactions with others. Consequently, complex processes such as learning to read and write develop through directed interactions with others. The theory, as described by Palincsar (2005: 285-286), posits that the child learns by carrying out tasks and activities under the guidance of skilled people, such as teachers. That happens through the process of other-regulation such as language, or collaborative talk, until they are able to take over the new knowledge and skills into their individual consciousness, from *inter*-mental activity to *intra*-mental activity. According to Engeström (2005: 159) and Kozulin (2003: 19), socio-

cultural theory stipulates that the development of a child's higher mental processes depends on the presence of mediating agents in the child's interaction with the environment.

From the abovementioned descriptions and explanations of the socio-cultural theory, it is the view of the researcher that ICTs are mediating agents in today's environment. If they are able to influence how we live our lives they can also influence the learners' learning process, including learning how to read. The researcher also takes into account the implications of the theory which stress that learners should be provided with socially rich environments in which to explore knowledge domains with their fellow learners, teachers and outside experts. Therefore, ICTs can be used to support the learning environment by providing tools for discourse, discussions, collaborative writing, and problem-solving, and by providing online support systems to scaffold learners' evolving understanding and cognitive growth. Below, the researcher indicates how the aim of this study as outlined in 1.4 will be achieved and the research question answered through the research methodology.

1.6. RESEARCH METHODOLOGY

Research methodology for this study was structured in three categories, beginning with the worldview of the study (paradigm), followed by the method or the way (research approach) in which the study would be conducted, and lastly with the plan (research design) which indicated how data was collected, from whom and how it would be analysed and presented.

1.6.1 Research Paradigm

The definition of 'paradigm' in the *Oxford English Dictionary* (2012) is a model, pattern or example of something, while *Merriam Webster Collegiate Dictionary* (2003) defines 'paradigm' as "an example or pattern: small, self-contained, simplified examples that we use to illustrate procedures, processes and theoretical points." The most quoted definition of paradigm is Thomas Kuhn's (1962, 1970) concept in the *Nature of Science Revolution*, that is paradigm as the underlying assumptions and intellectual structure upon which research and development in the field of enquiry is based. Babbie (2010: 33) also quoted

Thomas Kuhn's roles of paradigm as a model or a frame of reference through which to observe and understand the research study.

A paradigm is essentially a worldview, a whole framework of beliefs, values and methods within which research takes place. It is these world views within which researchers work. According to Creswell (2009: 6), a paradigm can be philosophical worldview assumptions, as summarised in the table below:

Table 1.1: Four worldviews

POSITIVISM	CONSTRUCTIVISM/INTERPRETIVE
<ul style="list-style-type: none"> • Determination • Reductionism • Empirical observation and measurement • Theory verification 	<ul style="list-style-type: none"> • Understanding • Multiple participant meanings • Social and historical construction • Theory generation
ADVOCACY/PARTICIPATORY <ul style="list-style-type: none"> • Political • Empowerment Issue-oriented • Collaborative • Change-oriented 	PRAGMATISM <ul style="list-style-type: none"> • Consequences of actions • Problem centered • Pluralistic • Real-world practice oriented

The selected paradigm for this study is interpretivism, which refers to approaches that emphasise the meaningful nature of people's participation in social and cultural life (Creswell, 2009: 8). According to Kandel (2007), it relates to a world that is interpreted through the mind. The researcher identified it as relevant to this study because the meanings teachers confer upon their own and others' actions in supporting learners experiencing reading difficulties were analysed. The researcher explores, explains and describes the use of ICTs to support learners with reading difficulties. To be able to do that the researcher needs to identify the method or the way in which the abovementioned can be conducted. Below are the research approach and the reasons it was selected.

1.6.2 Research Approach

Research comprises skills, assumptions and practices that the researcher uses as he or she moves from paradigm to the empirical world. Creswell, (2010: 257) states that there are three recognised approaches for the procedures for conducting research: quantitative, qualitative and mixed methods. Each has its own purposes, methods of conducting the inquiry, and strategies of collecting and analysing the data and criteria for judging quality. For the purpose of this study a qualitative approach was selected to gain first-hand, holistic understanding of the use of ICTs to support learners experiencing reading difficulties. A

qualitative approach is defined as inquiry in which researchers collect data in face-to-face situations by interacting with selected persons in their setting (MacMillan & Schumacher, 2006: 315). Seemingly, Creswell (2007: 56) defines it as an inquiry process of understanding in which the researcher develops a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting. For Patton (2002: 39), the qualitative approach is naturalistic in that it seeks to understand phenomena in context-specific settings, such as real world settings, in which the researcher does not attempt to manipulate the phenomenon of interest.

Qualitative approach in this study was viewed as an approach that would help the researcher to explore the use of ICTs as support mechanism, present a detailed view on their use and study the way teachers support learners experiencing reading difficulties and ultimately arrive at guidelines to be used by teachers when supporting the learners.

1.6.3 Research Design

The 'research design' as defined by Babbie and Mouton (2003: 74) is a plan or blueprint for how the researcher intends conducting the research. It is a strategic framework for action that serves as a bridge between research questions and the execution or implementation of the research. It is the plan that guides the arrangement of conditions for collection and analysis of data (Terre Blanche & Durrheim, 2002: 29). De Vos, Strydom, Fouche and Delport (2005: 268) define it as the option available to qualitative researchers to study certain phenomena according to formulae suitable for their specific research goal. Creswell (2007: 50-187) and De Vos et al. (2005: 269) agree with the abovementioned definitions and further identify the following five strategies of inquiry that could be used to design qualitative research: narrative, phenomenology, ethnography and autography, case studies, and grounded theory.

In this study the researcher used phenomenology because it provides an in-depth understanding of the lived experience of participants. According to Groenewalt (2004: 11), it is a way of capturing rich descriptions of phenomena and their setting. For Welman, Kruger and Mitchell (2011: 191), the phenomenologist is concerned with understanding social and psychological phenomena from the perspectives of people involved. The other reason that phenomenology was selected for this study was that the researcher was concerned about the way in which teachers support learners experiencing reading difficulties. It is contextual in nature and does not aim to generalise findings or settings

(Maritz & Visagie, 2010: 10). For the researcher to be able to carry out the phenomenological design, the choice of the participants is very important.

1.6.4 Population and sampling

The ‘population’ may be individuals, groups, organisations, human products or events, or the conditions to which they are exposed. McMillan and Schumacher (2006: 119) further indicate that the elements conform to specific criteria to generalise the results. Welman, Kruger and Mitchell (2011: 52-53) write that the population need not necessarily be people. White (2004: 49) also describes population as all possible elements that can be included in research. In this study the population are teachers, specifically SBST members and Learning Support Educators (LSEs). LSEs are also defined and described in full in section 1.13 below.

‘Sampling’ is defined as an act, process or technique of selecting a suitable sample (*Merriam Webster Collegiate Dictionary*, 2003). A sample is a small portion of the total set of objects, events or persons that together comprise the subject of study (Welman et al., (2011: 55). A sample can also specify how participants will be selected in a study (McMillan & Schumacher 2006: 119). De Vos, Strydom, Arkava and Lane in (Fouche & Delpont, 2009: 194) define a sample as comprising elements of the population considered for actual inclusion in the study. The researcher, guided by the abovementioned definitions, viewed a sample as a subset of measurement drawn from a population in which the researcher is interested.

In this study, a nonprobability sampling technique was employed because the odds of selecting a particular individual are not known and the researcher did not know the population size (Gravetter & Forzano, 2003: 118). Nonprobability sampling refers to cases in which the probability of including each element of the population in a sample is unknown (Bless & Higson-Smith, 2000: 86). Babbie (2010: 192) defines it as any technique in which samples are selected in some way not suggested by probability. Examples include accidental reliance on available subjects as well as purposive, judgmental, quota and snowball sampling.

Purposive sampling was used because it selects people based on the particular purpose of the study. A sample was chosen on the basis of what the researcher considered to be typical units (Bless & Higson-Smith, 2000: 92). Babbie (2010: 193) indicates that the

units to be observed in purposive sampling are selected on the basis of the researcher's judgment about which ones will be the most useful or representative. The participants for this study were SBST and LSEs because learners experiencing barriers to learning in schools are referred to them for support. The other reason is that the researcher has full knowledge of SBST and LSEs and their line of functions. They are the ones who support learners experiencing barriers to learning, including those with reading difficulties. Now that the participants are known the section below outlines how data will be collected from the participants.

1.7. DATA COLLECTION

Qualitative research data usually is in the form of words, images and descriptions, and language, verbal and non-verbal, has symbolic meaning. Qualitative researchers want to make sense of the feelings, experiences, social situations, or phenomena as they occur in the real world, and therefore want to study them in their natural setting (Kelly, 2010: 287). For the researcher to achieve the abovementioned, interviews and observation methods of collecting data should be used. According to Creswell (2009: 178-181), phenomenological data collection is conducted through interviews (both individual and focus groups), documents, observations and audio-visual material. Agreeing with Creswell, Terre Blanche, Kelly and Durrheim (2010: 275-279) also write that the qualitative interpretive researcher conducts interviews in a more open-ended and in-depth manner. In this study the researcher adopts a qualitative, phenomenological and interpretive way of conducting research, as outlined in section 1.6 above, and as a result data in this study was obtained by means of interviews (semi-structured, one-on-one individual and focus group) and observations with both SBSTs and LSEs. Below is a description of how data was collected.

1.7.1. Interviews

Interviews are the most predominant mode of data collection in qualitative research. They allow the researcher to understand the world from the participants' points of view, to unfold the meaning of people's experiences and to uncover their lived world prior to scientific explanations (Kvale, in Sewell, 2001: 1). Interviews are described as a more natural form of interacting with people which gives an opportunity to get to know them and understand how they think and feel (Kelly, 2010: 297). On the other hand, Creswell (2012: 217) simplifies the definition of interviews by referring to it as a process by which a

researcher asks participants general, open-ended questions and record their answers. The researcher concurs with the abovementioned scholars and viewed interviews as interaction with participants, with the aim of collecting empirical data and understanding their experiences.

In research, three types of interviews listed by Welman et al. (2011: 165-167) and Kelly (2010: 303) are structured interviews, in which the interviewer is restricted to a predetermined set of questions, semi-structured interviews, which allow the interviewer to use probes with a view to clearing up vague responses, and unstructured interviews, when the interviewer might not have a predetermined list of questions but a general idea to explore. Given the types and description of interviews above the researcher selected semi-structured interviews because they provide a general understanding of the problem and allow for further probing and elaboration of incomplete or vague answers.

Before starting the interview the researcher drew up an interview schedule which was examined and approved by the University of South Africa (UNISA) Ethical Clearance Committee. The schedule consisted of a list of questions that were explored during the interview (see Appendix E). According to White (2004: 58), the advantages of an interview schedule are that:

- the researcher can make sure that the same information is obtained from a number of people by covering the same material and
- it helps make interviewing across a number of different people more systematic by focusing on the issue to be discussed in the interview.

Producing an interview schedule beforehand forces the researcher to think explicitly about what he/she hopes the interview might cover. It forces the researcher to think of difficulties that might be encountered, for example in terms of questions, wording or sensitive areas (Creef, 2011: 296). Sharing the same view with Creef about the use of an interview schedule is Welman et al. (2011: 167), who write that the researcher can determine whether the set questions are sufficiently thorough and correct to elicit the required information.

As indicated in section 1.8 (above), individual interviews and focus interviews were selected for this study, and one-on-one interviews were held with the LSEs because they were servicing a cluster of schools and there were only a few of them in Tshwane South

District in which the study was conducted. Focus group interviews were held with SBST members in order to gain a shared understanding, and to encourage participants to share perceptions, points of view, experiences, wishes and concerns without pressure (de Vos et al., 2005: 299). The other reasons for using focus groups were that they are:

- a self-contained method which serve as the principal source of data
- used as a supplementary source of data that relies on some other primary methods, such as survey and
- used in multi-method studies that combine two or more means of gathering data in which no one primary method determines the use of the others.

Collected data through the interviews was transcribed and analysed in a manner that is explained in section 1.9 below.

1.7.2. Observation

Observation is regarded as one of the key methods of data collection (Dyer, 2006: 79). According to Sommer and Sommer (1997: 45), it is the ideal research method, but as an accompaniment to other procedures such as interviews. Observation is used to obtain information on both current and past behaviour of people. It is said to be often less costly and/or more accurate if the current behaviour is observed rather than asking participants about it (Smith & Albaum, 2010: 99). The researcher agrees with Smith and Albaum, and further defines observation as the process whereby the researcher records information they see on site.

Babbie (2010); Kelly (2010); Babbie and Mouton (2003); Bless and Higson-Smith (2000) and Terre Blanche and Durrheim (2002) touched on the following different types of observations, namely direct observation, unobtrusive observation and participant observation. They further highlighted that direct observation, if carried out in a structured and disciplined way, is one of the purest forms of research, as it taps directly into behaviour, rather than perceptions, secondary or self-reports of behaviour. Sharing a similar view is William (2006: 8), who stresses that it avoids many sources of error (see section 3.5.2).

For this study, direct observation was used because it focuses on observed behaviour or attributes of products or services, usually comparing several samples, including computers. Data collected from interviews and observations were linked with the literature, which was reviewed in Chapter 2.

1.8. LITERATURE REVIEW

In order for the researcher to conceive the research topic in a way that permits a clear formulation of the problem, some background information is necessary. This is mainly possible if the researcher reads whatever has been published, which is relevant to the research topic (Bless & Higson-Smith, 2000: 19-20). A literature review is defined by Terre Blanche and Durrheim, (2002:17) as the identification and analysis of literature related to one's research project. Creswell (2012: 80) defines it as a written summary of journal articles, books and other documents that describes the past and current state of information on the topic of a research study. Guided by the above sources, it can be defined as a process of reviewing different sources of information for the purpose of confirming how the study adds to the existing literature.

The purpose of a literature review as outlined by Bless and Higson-Smith (2000: 20) is to sharpen and deepen the theoretical framework of the research, familiarise the researcher with the latest developments in the area of research, to identify the gaps in knowledge, as well as weaknesses in previous studies and to study advantages and disadvantages of research methods used by others. Agreeing with Bless and Higson-Smith, White (2004: 20) stressed that the purpose is to shape the researcher's frame of reference early in the research. Kaniki (2010: 19) outlines the purpose by indicating that it puts the research project into context by showing how it fits into a particular field.

Based on the above definitions and purposes of the literature review it can be concluded that reviewing the literature will inform the researcher to become familiar with socio-cultural theory and other theories around the use of ICTs, for the purpose of supporting learners who experience reading difficulties. Babbie (2010: 506) emphasises that the researcher should organise the search of literature around the key concepts he/she wishes to study.

1.9. DATA ANALYSIS

Data analysis is the process of bringing order, structure and meaning to the mass of collected data (Creef, 2011: 333). They also highlighted that a data analysis plan should be constructed before conducting the actual data collection and analysis.

According to Mouton (1996: 168), qualitative data analysis focuses on the following:

- understanding rather than explaining a phenomenon in a particular context or setting;
- accurately keeping up with the concepts the respondents use to describe and understand phenomena;
- constructing stories and accounts that retain internal meaning and coherence of the phenomenon rather than breaking it into components and conceptualising valid accounts of social life and phenomenon rather than generalising explanations.

Bearing in mind that analysis of qualitative data takes place simultaneously with data collection, and that with Interpretivism the researcher is engaged, data collection and analysis are thus seen as a collaborative act. The researcher managed the data while studying it, using a cyclical process of data analysis described by Gay and Airasian (2000:240) to:

- become familiar with the data and identify main themes in them;
- examine the data in depth to provide detailed descriptions of the setting, participants and activities;
- categorise and code pieces of data and physically group them into themes;
- Interpret and synthesise the organised data into general conclusions or understandings.

Creswell (2007: 156-157) indicated the following steps as relevant for data analysis, which the researcher followed:

- Data management: Create and organise files for data.
- Reading: Read through texts, make margin notes, form initial codes.
- Describing: Describe personal experiences through time (personal bracketing).

The next step is to describe the essence of the phenomenon:

- **Classifying:** Develop significant statements. Group these statements into meaning units or themes.
- **Interpreting:** Develop a textural description, “What happened?”
 - Develop a structural description, “How” the phenomenon was experienced.
 - Develop the “essence”.
- **Representing and visualising:** Present narration of the “essence” of the experience, in tables, figures or discussions.

The selected steps suggested by Creswell and the details are outlined in 3.6 and 4.2.

1.10. VALIDITY AND RELIABILITY

Validity is defined by Babbie (2010: 151-153) and Joppe (2000) as the extent to which empirical measure adequately reflects the real meaning of the concept under consideration and reliability as a matter of whether a particular technique, applied repeatedly to the same object, yields the same results each time. Van der Riet and Durrheim (2010: 91-92) also explain validity and reliability respectively as the degree to which research conclusions are sound and the degree to which they are repeated. On the other hand, Denzin and Lincoln (2003) see the concept of reliability as a criterion by which qualitative research is judged as belonging to the positivist or post-positivist paradigm. They argue that those working from a constructivist paradigm would prefer the concept ‘dependability’.

Patton (2001) states that reliability is a consequence of the validity in a study, so in this study validity and reliability were not separated. The researcher ensured validity and reliability of the study by member checking for trustworthiness, and employing triangulation to control bias and establish valid propositions, because traditional scientific techniques were incompatible with the alternate epistemology. Triangulation is defined as a validity procedure in which researchers search for convergence among multiple and different sources of information to form themes or categories in a study (Creswell & Miller, 2000: 126). Triangulation involved examining data from interviews and observations to build a coherent justification for themes, which were established by converging the participants’ responses from interviews and perspectives with the outcomes of the observations and the literature reviewed.

1.11. ETHICAL CONSIDERATIONS

Ethical issues in qualitative research are often more subtle than those in survey or experimental research. Babbie and Mouton (2001: 470) advise those involved in research to be aware of general agreement about what is proper and improper in scientific research. Ethical considerations were observed throughout this research project, with the following measures followed and continuously used as a guide throughout the study, as outlined by du Toit (2006):

- Participants were informed of all aspects of the research that might influence willingness to participate.
- Written, signed consent was obtained from all participants beforehand.
- Participants were ensured of confidentiality, avoidance of harm (physical or psychological), reciprocity and feedback of results.
- Anonymity was also guaranteed.
- Permission from school principals and the GDE at the district level was requested and granted.
- Finally application for ethical clearance was made and approval granted. The certificate is included as Annexure 4.1.

1.12 LIMITATIONS

The researcher considered public ordinary schools which have *Gauteng Online* laboratories. *Gauteng Online* is a project initiated in 2002 by the GDE to furnish all the schools in the Province with computer laboratories. The reason the researcher selected primary schools is because identification of learners experiencing barrier to learning that include reading difficulties is made mainly in the primary schools. The researcher did not include special schools, secondary schools or full service schools, because their ICTs would be grounds for further research. Only schools with computer laboratories were selected for this study

1.13 DEFINITION OF TERMS

The following key terms and concepts outlined here as they are used and understood within the context of this study.

1.13.1 Information Communication Technologies (ICTs)

Information and Communication Technologies (ICTs) are defined by Elston (2007: 5) as not dissimilar to Information Technology (IT). She explains that the communication part was added relatively recently and adopted by the educational establishment. ICTs represent the convergence of information technology and communication technology, and are the combination of networks, hardware and software, as well as the means of communication, collaboration and engagement that enable the processing, management and exchange of data, information and knowledge (DoE, 2003: 15).

The definition of ICT in education goes far beyond that of a traditional computer connected to a network, encompassing a realm of new technologies, including human language technologies, “smart” devices, wireless and handheld devices, merging media devices and high-performance computing concepts and facilities. It focuses specifically on the application of these technologies in an educational context and environment, and should thus be seen as a tool or platform to support education, not an end in itself (Farrell & Shafika, 2007).

As technologies that together support people’s ability to manage and communicate information electronically, ICTs include not only computers but also equipment (or hardware) such as printers and scanners as well as software and systems needed for communication, such as the Internet. Video recorders, television, radio and digital cameras are also included, but these technologies are less frequently used in most schools (DoE, 2004: 16). In support of the above the researcher believes that Information Communication Technologies (ICTs) are technologies that together support people’s ability to manage and communicate information electronically.

1.13.2 Barriers to learning

Prinsloo (2007: 27) defines a ‘barrier’ as an obstacle or circumstance that keeps people or thing apart. It prevents communication and bars access to advancement. Barriers to learning refer to anything that may stand in the way or prevent a learner from fully

participating and learning effectively. Barriers to learning do not necessarily exist all the time, but can sometimes arise suddenly, due to circumstances, emotional trauma and a variety of other factors (DoE, 2004: 19).

1.13.3 e- Education / Learning

e- Education is the teaching and learning process in which technology is used to support the learning process. It is said to be pedagogy empowered by digital technologies. E-education, as defined in the White paper on e-education (DoE: 2004: 14) in the South African context, includes concepts that revolve around the use of ICTs to accelerate the achievement of national education goals. It is about connecting learners and educators to each other and to professional support services, and providing platforms for learning. e-education is commonly referred to as 'online education', and is the process of learning online [<http://www.myeducation.com>].

1.13.4 School Based Support team

School Based Support Teams (SBST) are established in every school to cater for all learners with special educational needs and learners experiencing barriers to learning (Nel, 2006: 4). The DoE (2001: 48) defines ILST as the team that puts in place properly coordinated learner support service to support the learning and teaching process by identifying and addressing learner, educator and institutional needs.

1.13.5 Learning Support Educators (LSEs)

Learning Support Educators (LSEs) are teachers employed at the District level but based at the schools to provide support to the ILST, and serve as a link between schools and the District office. The primary function of the LSEs, according to the DoE (2001: 47), is to evaluate and, through supporting teaching, build capacity of schools to recognise and address severe learning difficulties and to accommodate a range of learning needs.

1.13.6 Gauteng Department of Education Support forms

Gauteng Department of Education (GDE) support forms are designed to be filled by teachers when providing support or intervention to learners experiencing barriers to learning (DoE, 2001: 50).

1.14 CHAPTER DIVISION

The chapters in the study are divided as follows.

1.14.1 Chapter 1

Chapter 1 has presented the introduction to the study, comprising the rationale, problem statement aims of the study, research methodology and definition of terms. The purpose of this chapter was to give the reader an overall perspective of the study.

1.14.2 Chapter 2

In this chapter the researcher reviewed the literature pertinent to reading difficulties, socio-cultural theory, inclusive education and ICTs as a support mechanism to shape the frame of reference early in the research. The researcher began by discussing the relevant research on reading, the use of ICTs to support learners experiencing reading difficulties and provision of ICTs to ordinary public schools to obtain a significant deeper insight into the dimensions and complexity of the research problem.

1.14.3 Chapter 3

Chapter 3 outlines the research methodology that was used and provides a rationale for its suitability and relevance for the selected participants. It outlines the nature of the population and sample selection methods that were used. The researcher also describes ethical considerations to make the best professional judgments.

1.14.4 Chapter 4

In this chapter, the researcher describes the findings from the collected data. The data will be collected through individual and focus group interviews, and observations. Collected data will be analysed and findings presented in this chapter.

1.14.5 Chapter 5

This is the final chapter of this study and the researcher draws final conclusions to the findings, indicating how the research questions were answered throughout. The researcher made workable recommendations concerning the conclusions.

1.15 CONCLUSION

ICTs in public ordinary schools are mostly used by learners who are referred to as 'normal'. Those who do not have barriers to learning or special educational needs benefit fully from the use of ICTs and those with barriers to learning, such as reading difficulties, become passive spectators and are dependent on other learners or the educator. These experiences may affect the learners with barriers to learning in a negative way, because they do not feel part of the class and their self-esteem is lowered. It is the aim of this study to establish whether ICTs are successful when used as a support mechanism for learners experiencing reading difficulties.

The following chapter provides a more in-depth description of the theories applied as a framework for the research.

CHAPTER TWO

READING: INFORMATION COMMUNICATION TECHNOLOGIES WITHIN THE BROADER RANGE OF SUPPORT MECHANISMS

2.1 INTRODUCTION

The first part of this chapter orientates the reader towards the current state of reading difficulties of primary school learners, reflecting on what reading entails, how it is acquired, reading difficulties and various teaching and learning methods. The second part explores literature on the role of inclusive education, support mechanisms used by various teachers and ICT as a support mechanism. The researcher will also look into the current support mechanisms employed nationally and internationally, as a starting point towards socio-cultural theory that the researcher regards as a suitable framework for this study.

2.2 CURRENT STATE OF READING DIFFICULTIES IN PRIMARY SCHOOLS

As indicated in Chapter 1, reading difficulties are a worldwide phenomenon as evident internationally through reports from the No Child Left Behind (NCLB) Act of 2001, which indicated poor performance of reading among ethnic minorities and mainstream white Americans. The National Reading Panel (NRP) issued a similar report and the National Endowment for Art (2004), and National Institute for Child Health and Human Development (NICHD), National Research Council (NRC), (2010) released reports which indicated that the majority of primary school learners experience reading difficulties in South Africa, percentages ranging from 50-80% in the Grades 4-6 (Intermediate phases) between 2004 and 2010.

In addition, evaluations by the Department of Education (DoE) since 2001 at Grades 3 and 6 levels found that the reading abilities and performance of many young learners in Literacy and Numeracy were very poor. The literacy levels were below the required levels for the learners' age and grade; hence Naledi Pandor, then Minister of Education, launched the Foundations for Learning (FFL) Campaign on 8 March 2008 to improve learner performance in reading, writing and numeracy in all schools. This campaign was gazetted on 14 March 2008 as part of a four-year plan to improve the reading levels of all South African learners (*Government Gazette*, 2008: 1).

During the second year of the FFL campaign the new minister of Education, Ms. Angie Motshekga, introduced the Annual National Assessment (ANA) for Grades 1 to 6 learners in all the primary schools. In Tshwane South District, in which the study was conducted, 68 primary schools underperformed in Language and Mathematics according to the results of the ANA. The minister launched virtual teams (comprising therapists, inclusion specialists, learning support educators and remedial teachers who operated on the premises of a special school) in each District Office to support all the underperforming primary schools, particularly with reading skills.

In relation to the above, the researcher emphasises the importance of reading, which as Bruning, Schraw, Norby and Ronning (2004: 242) wrote: "... is the basic skill for all academic subjects and a language-based activity that involves constructing meaning from text". For Lerner (2006: 372), if learners do not learn to read they cannot succeed in life and the opportunities for academic and occupational success are limited.

2.2.1 Reading definition

Gillet, Temple and Crawford, (2004: 3-5) define reading as a complex cognitive process of decoding symbols with the intention of constructing or deriving meaning. As did Bruning et al. (2004: 245) and Lerner (2006: 376), the mastery of basic cognitive processes becomes automatic so that attention is freed for the analysis of meaning. The researcher concurs with the above definitions and views reading as a complex activity that involves a range of different skills, processes and types of knowledge.

Reutzal and Cooter (2010: 25) outline reading as understanding meaning of printed or written material and a means of language acquisition, communication, and sharing information and ideas. They also view it as an intensive process in which the eye quickly moves from left to right to assimilate text. However, Woolfolk (2007: 502) differs with the abovementioned authors in defining reading as a guessing game in which learners sample words and make predictions and guesses about meaning based on both context of other words in the passage and their prior knowledge. The researcher has thus come to the conclusion, based on the above definitions, that reading is the ability to interpret the information symbols and to recreate those same symbols so that others can derive the same meaning. To achieve full understanding of what reading is one must understand its prerequisites.

2.3 PREREQUISITES OF READING

Basic prerequisites for the development of reading skills in young children are a hierarchy of goal acquisitions outlined as language development and verbal meaning, perceptual skills, attending skills, listening skills and thinking skills (Fontenot 2010: 2). These skills form the basis on which the learner learns to manipulate letters, words and symbols and begins to see some form of equivalence between words and sentences and his/her own mental content. Similarly, Attneave (2004: 7) writes that the verbal and language meaning the learner brings to school and the degree of equivalence with the school's Language of Learning and Teaching (LOLT) and ver 4) writes that the prerequisites for reading include phonological awareness, phonemic awareness, vocabulary development, alphabetic principles and print knowledge. The researcher agrees with Fontenot's argument that the learner should develop the basic prerequisites for learning to read so as to be assured a reasonable chance of succeeding in the task of reading. The hierarchy of prerequisites of reading are described below and outlined in the form of a figure to show a step-by-step process of reading skills development.

2.3.1 Language development and verbal meaning

Fontenot (2010: 4) regards language development and verbal meaning as a process by which children come to understand and communicate language during early childhood. For Jefferson (2007: 4) a learner with poor speech discrimination may have difficulty acquiring reading skills. Recent research and debates show the importance of dealing with the nature of verbal and language meaning because it is predominant in the classroom, especially for the development of reading. Bruning et al. (2004: 243) stress the importance of language development and verbal meaning in the learner's learning of reading and indicates that reading is a language-based activity that also has contrasting meanings from those in text. They cited Mason and Au for whom reading is not word calling or sounding out but rather a special form of reasoning in which both the reader and the writer contribute to perspective, inference and logic. The meaning of concepts and its relationship (e.g., *hold the pen, paper or the letter in front of you*) gives the learner the added competence of what is involved in being able to read. This leads to the next prerequisite skills, namely perception.

2.3.2 Perceptual skills

Perception as explained by Fontenot (2010: 7) is the way information received by senses is interpreted, integrated and processed. For the learner to be able to read, he/she must learn to perceive figure-ground relationship, figures in space and left-right orientation as outlined by Gestalt psychology. Brunning et al. (2004: 245) argue that perceptual skills comprise the learner's ability to analyse, interpret, and give meaning to what is seen, and further define it as a processing portion of vision, and important skills that should not be overlooked when trying to repair an improperly working visual system.

Smith, Foko and Van Deventer (2008: 74) points out that if the learner has adequate perceptual reception he/she is able to discriminate between sounds and symbols, associate various components remember visual and auditory sequence of the words or sounds that lead him/her to be able to read. For example, the shapes *c, o, i, u* and *v* are the basic elements contained in letters of the alphabet. It is these shapes that learners should master as they form the elementary distinguishing features of the letters of the alphabet.

Once the perceptual skills namely to differentiate and discriminate between the abovementioned shapes are developed, the meaning and representational relationship between between basic shapes and sounds are formed. At this stage the learner understands how lines and shapes are joined together to form letters and how letters are joined together to form words as a result he/she must then be taught how to attend to the appropriate cues. Perceptual skills versus reading skills will be explored further in conjunction with the use of ICTs in the next section of this chapter.

2.3.3 Attending skills

Fontenot (2010: 9) indicated that without the mastery of attending skills it is unrealistic to expect the learner to learn to read. He mentioned visual and auditory attending skills as the ones needed for the learner to be able to read. Attending skills help the learner with discrimination, relation and meaning to the words and symbols which can later be transferred to reading. Kazdin (2004: 80) explains that learners need to direct their attention to the relevant elements of text in an organised and systemic way, with the help of appropriate listening activities.

2.3.4 Listening skills

'Listening' refers to a child's ability to attend to and distinguish between both environmental and speech sounds from one another. It is crucial for a child to develop good listening skills in order to cope with the academic demands of school and to learn adequate reading skills (Fontenot, 2010: 10). For Lerner (2006: 350-351), a learner's listening skills also depends on a number of aspects of auditory abilities, such as determining the direction from which a sound comes, recalling or memorising auditory information, intonation of, and awareness of rhythmic patterns.

Listening provides the basis for the development of expressive language and is important in the acquisition of early reading. (Jefferson, 2007: 11). Recent research by Graceffo (2009: 69) pointed out that learners should acquire analytical and marginal listening skills before they can start learning to read, because that will facilitate the reading process and enhance the thinking abilities.

2.3.5 Thinking skills

Fontenot (2010: 12) advises that thinking skills should have a foundation of visual and auditory perception so that the learner can use appropriate mental images. He further explains that the learner should experience grouping of objects, letters of the alphabet to form words, and have an opportunity to think of a variety of grouping combinations. Fleetham (2009: 63) defines thinking skills as the mental processes used to carry out such actions as solving problems, making decisions, asking questions, making plans, passing judgements, organising information and creating new ideas. Thinking skills with regard to reading will help learners to link new information with old. They play an important role in reading comprehension by providing the knowledge base for assimilating new text information. Attending skills guide the way the reader allocates attention to different parts of the reading passage, allowing the reader to make inferences about text material, and permitting the reconstruction of content (Graves, 2000: 274).

Fontenot (2010: 13) stressed that unless learners developed adequate equivalent language meaning and perceptual reception to integrate their attending and listening skills and transform these into effective relations and images, their thinking skills will be less efficient. Consequently the learner cannot be expected to learn to read. He further advised that information and understanding about the learners' thinking should be utilised to know

how they think to develop language and verbal meaning, perceptual, attending and listening skills.

The following figure illustrates prerequisites of reading and steps in how reading skills develop, as outlined above. Mastery of these prerequisite skills form a declaration upon which educational support mechanisms must be built rather than educational mechanisms of remediation after the acquisition of reading skills.

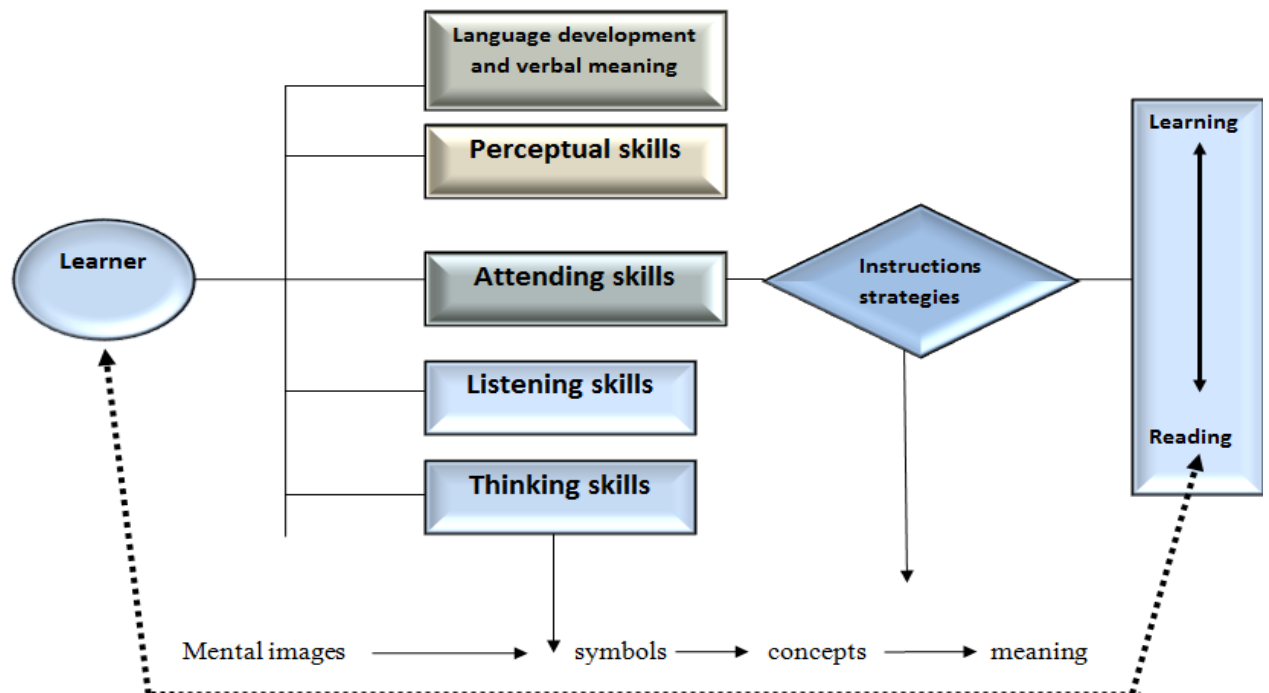


Figure: 2.2: Prerequisites of reading, adapted from Fontenot (2010).

2.4 ACQUISITION OF READING

According to studies conducted by Muter, Hulme, Snowling and Stevenson (2004: 665), reading is a linguistic skill that is learned only after learners have acquired considerable proficiency in oral language. As the spoken language develops the brain begins to recognise the beginning of a language hierarchy (Dednam 2007: 124; Sousa, 2005: 19). Shanker and Ekwall in Dednam (2007: 124) indicate that reading is acquired through three dimensions, i.e., the dimension of form for identifying words and sentences in the written text, the dimension of function for giving meaning to the written text, and the dimension of pragmatics which becomes more involved as the reading abilities improve. The abovementioned authors agree that reading acquisition can only be possible through the main components of reading, which they explain differently, for example Gunning (2010:

12-17) identifies the components of reading as emergent literacy, early reading, growing independence, reading to learn and abstract reading.

Dednam 2007 (124-127) on the other hand recognises the main components of reading as analysing words and understanding of words and ideas from Ekwall and Shanker's reading framework. Lerner (2006: 376-382) again outlines the components of reading as phonemic awareness, letter-sound recognition, phonics, decoding, fluency, vocabulary and text comprehension. Bruning et al. (2004: 248-256) argue that for the learners to acquire reading skills they should be able to respond to their environment and later to the print. They further explain that to become a reader the following skills need to be acquired, i.e., visual-cue, phonetic-cue, systemic phonetic decoding, decoding and beginning reading. From the above statements it can be concluded that the researchers agree on four major skills required for reading acquisition even though they give different names. The researcher concludes that the following skills are needed for reading acquisition: phonemic awareness, phonics, understanding words and ideas and fluency.

2.4.1 Phonemic awareness

Phonemic awareness is the understanding of words that are made up of individual sounds (phonemes) and, with the manipulation of these sounds, the reading beginner is able to group new words, culminating in the spoken language (Turan & Gul, 2008: 21-34). This is the stage at which speech sounds are identified, recognised and manipulated (Shanker & Ekwall, 1998 in Dednam, 2007: 124). Phonemic awareness is the ability to notice, think about and work with individual sounds in spoken words. It focuses on learners' hearing and using the sounds of language (Lerner, 2006: 377). Bruning et al. (2004: 249) confirms what Lerner has explained regarding phoneme awareness, though he gave it a different name, 'visual-cue'. During the phoneme awareness learners will start to recognise letters and to relate them to the associated sound.

2.4.2 Phonics

Phonics is the stage at which the learner starts to read, because he/she applies the knowledge acquired during the first stage by forming and storing association between some of the words. They learn to decode printed language and translate print into sounds through the alphabetic principle of the symbol-sound relationship (Lerner, 2004: 378; Dednam, 2007: 124). Decoding, according to Vaughn, Bos and Schumm (2004: 75) is the

phonological awareness process by which the learner begins to link the spoken word to the printed word and enables him or her to understand that the latter represents the former through a system of letter sequences (graphemes) that form individual sound (phonemes), and by blending of the phonemes the words can be pronounced. The learner needs to listen and concentrate to be able to decode words when speaking, reading and, ultimately, when writing.

2.4.3 Understanding ideas

During this stage the learner can already identify words and analyse them, and now start to give meaning to the text to help in comprehending what he or she is reading. Shanker and Ekwall in Dednam (2007: 126) classified this stage into vocabulary and comprehension. Lerner (2006: 386) refers to understanding ideas as vocabulary, which he defines as the words a learner/reader understands. This has a significant effect on reading achievement and it is strongly related to reading comprehension, while comprehension, according to Dednam (2007: 127), refers to gathering meaning from the text, making inferences, evaluating the correctness, usefulness, applicability and value of the information in the text, and appreciating emotional involvement in the text by experiencing a sense of excitement.

2.4.4 Fluency

When learners are able to identify, analyse, and give meaning to the text, they will be able to read fluently because s/he will be in possession of adequate sight vocabulary and labour to decode many of the words in the reading text (Lerner, 2000: 382). Reading fluency is the ability to read connected text rapidly, effortlessly and automatically (Hook & Jones, 2004; Meyer, 2002; National reading panel, 2000). Jenkins, Fuchs, Vandern Broek, Espin and Deno (2003:56) recommended that readers develop fluency in order to make the bridge from word recognition to reading comprehension.

The view of Bursuck and Damer (2007: 9) is that comprehension of reading material occurs when the learner derives meaning from reading material by ordering individual words into the structure and context of the sentence. It is well-documented that comprehension of language, whether written or spoken, is a complex task that involves many different cognitive skills and processes. Most researchers agree in their definition that reading is an interactive and social process. According to Cain and Oakhill (2007: 3);

Sousa (2005: 90) and Bender (2004: 180), reading comprehension relies strictly on spoken language comprehension and proficiency, and has an influence on how well the learner learns to read fluently. The four stages of reading acquisition are diagrammatically outlined in a figure below to show the link.

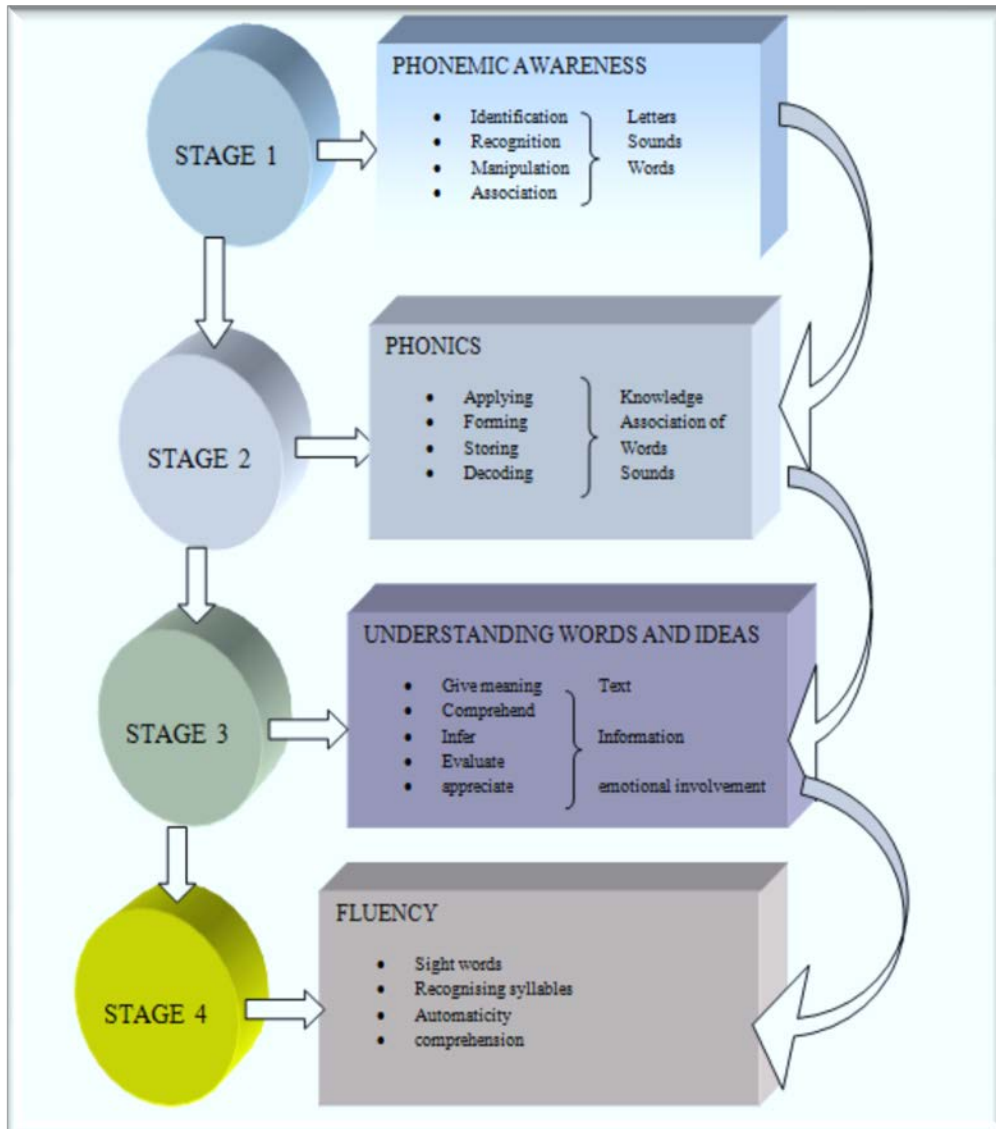


Figure 2.3: Stages of reading acquisition (source: Dednam, 2007; Lerner, 2006; Bruning et al., 2004)

The acquisition or development of reading skills serves as a major academic foundation for all school-based learning. Failure to acquire the abovementioned reading skills will result in reading difficulties, which is explained in the next section, along with various teaching and learning methods (which serves as the basis of this study).

2.5 READING DIFFICULTIES

Reading is physically and psychologically draining for learners with reading difficulties, and as a result they may avoid reading whenever they can (Lerner, 2006: 372). Richek, Caldwell, Jennings and Lenner (2002: 3) pointed out that the ultimate results of reading difficulties are unemployment, poverty and convicted crimes. Lyons (2003) reported on the findings about reading difficulties from the research supported by NICHD that they constitute an educational problem, and failure in school can be traced back to reading difficulties. In North American schools, for example, reading difficulties are prevalent in 40% of fourth graders (Snelgar, 2010: 59).

Paratore and Dougherty (2011: 12) define 'reading difficulties' as unexpected reading failure that cannot be accounted for by other disabilities. They further mentioned that it is a generalised cognitive-linguistic weakness, or obvious environmental causes, including lack of appropriate instruction. The Individuals with Disability Education Act (IDEA) defines reading difficulties as lack of basic reading skills that involve the foundational skills required to understand the relationship between letters, sounds, and the words they represent. The unusual type of severe reading difficulties is known as 'dyslexia', which is not included in this study, rather the focus is on general reading difficulties, viewed by Cain (2010: 14) as a failure to develop word reading and reading comprehension.

Learners with reading difficulties have difficulty understanding the link between letters and sounds and so cannot decode words or use phonics skills to sound them out (Woolfolk, 2007: 502). The researcher concurs with Cain and Woolfolk and further concludes that if a learner does not have the ability to derive meaning from the symbols used in a writing system it means s/he is experiencing reading difficulties.

Reading difficulties commonly experienced in public ordinary primary schools as outlined by Shanker and Ekwall in Dednam (2007: 134-136) include inadequate ability to identify basic sight words, problems with word analysis skills and decoding, inadequate vocabulary development and lack of comprehension skills. In addition, Moats and Tolman (2009: 1) identified other reading difficulties, such as a phonological deficit, which implies problems in the phonological processing system of oral language, lack of speed and accuracy of recognising printed words and comprehension deficit. It is thus important that teachers should be aware of the above in order to support learners to acquire the necessary reading

skills. The knowledge of reading difficulties and their possible causes will thus enable the teacher to work preventatively.

Looking at the above definitions, the researcher concludes that reading difficulties have root causes. For the difficulty or problem to be addressed, possible causes need to be identified. The relevancy of this to this study is that, for a teacher to address reading difficulties, s/he should know the possible causes. In the following section these are discussed.

2.5.1 Possible causes of reading difficulties

Studies by Prinsloo (2005: 28), Jennings, Caldwell and Lerner (2006: 24-27), and Sousa (2005: 11) indicate that the main possible causes of reading difficulties are environmental and social factors. Having a different view, Ashton-Townsend (2007: 12) found possible causes of reading difficulties to be lack of good hearing, good memory, good vocabulary and good visual perception and discrimination. Similarly, Wearmouth, Soler and Reid (2003: 3) indicated that reading difficulties are likely caused by difficulty with language processing and visual reasoning. On the other hand, they side with Jennings et al. and Sousa, in believing reading difficulties to be caused by inherited conditions or developmental differences in the brain, as well as environmental factors.

A study published in the July 2011 issue of *Biological Psychiatry* (Vol. 54, No. 12), suggested that reading difficulties may result from environmental and inherent conditions. A more environmentally influenced condition affects the reader's memory, in which poor readers rely on memory for whole words rather than decoding strategies, leading to persistent difficulties in reading accuracy, reading fluency and comprehension. This type of reading difficulty is more common in disadvantaged schools and communities. Inherent conditions affect the reader's neural pathways, making it difficult to decode words and leading to inaccurate word recognition.

According to Glenn (2009: 1), one of the greatest causes of reading difficulties is incorrect teaching and learning methods, as discussed in the following section.

2.5.2 Teaching and learning methods used to address reading difficulties

Learning to read is the initial stage of becoming literate (Wearmouth et al., 2003: 1). This statement is supported by a number of scholars, such as Yeats (2010), and Goodman (1986), who share views on how learners learn to read and the processes and skills that are involved in reading. Wearmouth et al., (2003: 1) stress the importance of understanding the different approaches of teaching reading before deciding on a suitable reading programme or support because reading approaches underpin the reading programmes and support mechanisms. Four basic approaches that are discussed below are not the only approaches used for reading but were selected by the researcher for the purpose of this study.

2.5.2.1 Whole-language approach

The whole-language approach is a philosophical approach to teaching and learning that stresses learning through authentic, real-life tasks (Woolfolk, 2007: 502). Mercer and Mercer (2005: 329) agree with the above by explaining it as teaching reading in a holistic, meaning-orientated and integrated way. With this approach the learners read meaningful, predictable whole words then use these familiar words to begin to learn new words and phrases. Research by Byrne, Fielding-Barnsly and Ashley (2000), indicated that the whole-language approach cannot be used in isolation but rather needs to be integrated with other approaches, discussed below.

Dednam, (2007: 140-141), Nel, (2007: 98-106), Lerner, (2006: 390-392) and Mercer and Mercer (2001: 342) support the use of the following reading approaches in conjunction with the whole-language approach.

2.5.2.2 Bottom-up reading approach

The bottom-up reading approach, according to Dednam (2007: 140), is used to help learners to learn the letters first and then how to analyse words. For Wearmouth et al. (2003: 1), the bottom-up approach is a data-driven model, which suggests that the reader looks first at the component features of the letter in the words before considering its meaning. The written words are analysed and encoded for their sounds components then synthesised to spoken words. Based on the above definitions and explanations the researcher argues that teaching of bottom-up skills emphasises the mastery of phonics and

word recognition. For the learner to learn comprehension skills the top-down approach should be used.

2.5.2.3 Top -down reading approach

The top-down approach differs from the abovementioned approach as the learner has to read complete sentences and immediately attach meaning to what was read. Therefore, s/he will see the words as a whole and learn to recognise them on sight. The learner will gradually become aware of the different words in the sentences and then of the letters in the word (Dednam, 2007: 140). Wearmouth et al. (2003: 1) also indicate the contrast by defining the top-down approach as a concept-driven model which assumes that the reader first anticipates the meaning of the text before checking the available syntactic and graphic clues. Wearmouth et al. (2003: 1-3) and Dednam (2007: 139-40) point out the limitations of both approaches, with Stanovich's approach suggesting an interactive reading approach to accommodate both word recognition and comprehension.

2.5.2.4 Stanovich's interactive reading approach

With Stanovich's interactive approach the learner learns the lower level reading process while also attaching meaning to the content. It accommodates both word identification and comprehension, while learners learn to read (Dednam, 2007: 140). According to Wearmouth (2003: 6), Stanovich suggested this approach for the reader to use information simultaneously from a different level, to avoid relying more heavily on some levels than on others. Stanovich argues for three processes that interact and constitute reading when learners read, namely, sound, sight and meaning. As a result, the principles have been adapted by many other reading approaches, including those discussed above.

The researcher identifies with the aforementioned approaches and believes that they will work very well within Vygotsky's socio-cultural theory, emphasising the social environment as a facilitator of development of learning (Schunk, 2004: 291). This theory states that learning is an active process of creating meaning from different experiences, which implies that learners will learn reading best by trying to make sense of sounds, letters, words and sentences on their own, with the teacher as a guide to help them in the process (Reyhner & Hurtado, 2008: 82-95). In addition, the National Curriculum Statement (NCS), which is the current curriculum for South African Education, encourages

learner-centred activities in which the teacher serves as a facilitator of learning (DoE, 2008: 4).

The NCS encourages teachers to adapt, modify and/or differentiate curriculum for the learners experiencing barriers to learning, including those who experience reading difficulties. The final report of the review of the NCS presented by Minister A. Motshegwa in October 2009 calls for the teaching of reading in early grades to consider the principles of inclusive education as laid down in the Education White Paper 6 (EWP6). Reading approaches discussed above are aimed at acknowledging the principles of inclusive education that all learners can learn and all learners need support. The approaches are used to address the barriers that learners with reading difficulties experience by catering for their different learning styles, especially when all the approaches are integrated with the Whole Language Approach (DoE, 2001: 6). The curriculum, schools, classrooms, teaching and learning are motivated by the principles of inclusive education, discussed in detail below.

2.6 INCLUSIVE EDUCATION

This section provides a brief overview of the literature on inclusive education, more specifically what it embodies in terms of education from a global perspective and in the South African context. Furthermore, discussion covers how the overarching framework of inclusive education may or may not support mechanisms used to address reading difficulties. Inclusive education was established as a result of a world conference on Special Needs Education held in Salamanca, Spain in June 1994, with 92 governments and 25 international organisations being represented. They agreed on a dynamic new statement on the education of all learners with disabilities, and called for inclusion to be the norm. In addition, the conference adopted a new 'Framework for Action', the guiding principle of which was that ordinary schools should accommodate all learners, regardless of their physical, intellectual, social, emotional, linguistic or other conditions (Centre for Studies on Inclusive Education, 2008).

As a policy, inclusive education aims to ensure optimal accommodation and inclusion of the full variety of educational needs in a single education system (Donald, Lazarus & Lolwana, 2002: 24), and South Africa responded to it by developing Education White Paper 6 (EWP6) in 2001. It saw inclusive education as acknowledging that all children can

learn, respecting differences in learners, meeting their needs and maximising their participation in the culture and the curriculum of educational institutions (DoE, 2001: 6). The United Nations Educational Scientific and Cultural Organization (UNESCO,2005) views inclusive education as a dynamic process of addressing and responding to diversity of needs of all learners and of seeing individual differences not as problems but as opportunities for enriching learning. Sharing this view are Swart and Pettipher (2007: 4), who terms/explains it as the development of an inclusive community and education system.

Bornman and Rose (2010: 6) support the above definitions and views, arguing that the focus of Inclusion should no longer be on “specialness” of learners and/or education that they need, but rather on increasing participation by the removal of barriers to learning (including reading difficulties) in order for the learners to reach their full potential. According to Snelgar (2010: 16), the definition of inclusive education does not mean ‘dumping’ learners with diverse needs into a stagnant general education, without support for teachers or learners. Kruger and Yorke (2010: 293) stress that inclusion of learners with diverse needs implies a shift from a medical deficit model of disability to a social systems model. In line with this, the researcher views the primary goal of inclusive education as being to serve all learners adequately, including those experiencing reading difficulties, thus creating a fluid and dynamic approach to the model of inclusion. This is a model in which excellence and equity are driving forces.

In the light of the aforementioned, all learners experiencing barriers to learning, including those who experience reading difficulties, need to be supported. The DoE has made provision for this in The National Strategy on Screening, Identification, Assessment and Support (SIAS), which is the key principle of the inclusion policy to provide support according to the level and nature of support needs (DoE, 2008: 4). Section 2.5.1 indicated various causes of reading difficulties and 2.5.2 outlined various approaches used to address reading difficulties. In the following section the role of inclusive education in addressing reading difficulties through early identification, prevention and support is discussed.

2.6.1 The role of inclusive education in addressing reading difficulties through early identification, prevention and support

The proponents of inclusive education as maintained by Engelbrecht and Green (2001:5) are the responsibility of any education system that wishes to recognise, accommodate and support learners with any type of barrier in any classroom, including those experiencing reading difficulties. The SIAS alludes to this statement by indicating that the approach to addressing barrier to learning should include reading difficulties and the provision of the full range of support.

Donald et al. (2002: 24) highlight two major approaches of inclusive education in support of proponents mentioned above, i.e., prevention and support. This study concentrates on prevention and support through the use of ICTs, with prevention focussing on elements of social transformation that can help to prevent the occurrences of barriers to learning and support on providing education support services to learners experiencing barriers to learning, including those who experience reading difficulties. For the purpose of this study the researcher will focus on learning support for addressing reading difficulties by means of ICT's as one of the barriers to learning.

Before learning support can be provided, identification of difficulties should first take place. Early identification of reading difficulties might help to prevent the difficulty from occurring in other learners through screening of all. This statement is supported by the SIAS, which serves as an element of an inclusive education system. The SIAS, like all the other key strategies of the policy, aims to address barriers of all learners in South Africa, particularly those who are vulnerable and most likely to be marginalised and excluded (DoE, 2008: 4).

Snelgar (2010: 17-18) identifies the overarching framework of inclusion as a 'parachute', which carries literacy acquisition in all learners. She stated that early identification of learners' literacy barriers during literacy acquisition is crucial, which coupled with early intervention considers also the strengths of the learner, allows for more positive academic outcomes, minimises the destructive relationship between vocabulary and reading development, and maximises the constructive relationship between reading development and vocabulary.

Learning support is described by Ngwenya (2003: 31) as an intervention approach whereby strategies to improve learning are implemented. Yorke (2008: 18) takes a similar perspective, defining learning support as a process of enriching the regular education that is taking place in the classroom, and therefore involves rendering a broad spectrum of assistance to achieve the necessary outcomes. On the other hand, Swart and Pettipher (2005: 6-9) view learning support as a preferred term to remedial education and further outline the contrast between the two by indicating that remedial education has to do with diagnosis and treatment while learning support follows the principles of a social system model. The latter moves away from the “specialness” of learners and the special form of provisions made to remove barriers. It is the model that increases opportunities for all learners to learn and succeed.

The study by Kruger and Yorke (2010: 293) shows that if the learning support responds to learners’ difficulties within the framework of inclusive practices then the positive effects of the teacher’s work and interactions may be far-reaching. Learning support has an important role to play in accommodating and ensuring the integration of learners with diverse needs, including those who experience reading difficulties. Even though prevention and identification are pivotal, the researcher concentrated on those learners who have not been identified early enough and who were supported by mechanisms other than ICTs.

The primary objective of this study is to identify learners experiencing reading difficulties and establish a support mechanism in the form of ICTs. Essential component for securing, nurturing and fulfilling different barriers of these learners can be investigated, at the same time creating teacher and administrative awareness to further the evolutionary goals of inclusion, namely equity and excellence.

2.6.2 Support mechanisms used to address reading difficulties

Several researchers, including Dednam (2007) and Horn (2009), came up with support mechanisms to support learners experiencing reading difficulties. Mechanisms included reading games, reading in real-life situations, music, and reading programmes. Bohman-Kalaja (2007: 7-20) reports on the experience of using games and play to support reading difficulties, with the theory of play allowing readers to recognise and analyse play text while on the other hand constituting a mode of writing that impacts a text structure and

architecturally reflects the mode of interaction between the reader and the author. Bursuck (2011) supports the theory and stresses that learning to read is fun, so children learn and retain more information when they are playing and enjoying themselves. This theory was introduced in 1960 by Wagner and Hosier (1960), with Gibson (2009) adding ideas on how to introduce children to the pleasure of reading skills while building up a general awareness of written and spoken language in everyday situation through games.

Fuchs, Mock, Morgan and Young (2003), Gresham, Restori and Cook (2008), Fletcher and Vaughn (2009), and Reschly (2005) devised programmes and techniques to support learners experiencing reading difficulties, such as imaging technique, response to intervention (RTI), and collaborative co-teaching (to mention a few). Imaging technique by Ngwenya (2003: 35) encourages learners to form pictures or ideas in their mind while reading, thus enhancing comprehension. Collaborative co-teaching has also been explored by Kruger and Yorke (2010), for whom it was a mechanism that requires a learning support teacher. Its outcomes include effective instruction and positive learner development through activities that make learning fun.

Horn (2009: 129) has explored music as an intervention strategy for learners experiencing reading difficulties, specifically because of a poor phonological system in which sound sequences make up syllables. Learners may benefit from a music intervention strategy because learning to read makes use of sounding out letters to build words. The findings of Horn's study presented in a logical and interesting way, allows music to facilitate the feeling of accomplishment and improve self-esteem of the learners. These are but a few mechanisms that have been used successfully to overcome reading difficulties.

Van Wyk and Louw (2008), Reynolds and Nicolson (2006) Chigona, Chigona, Kayongo and Kausa (2010), highlighted the success of the use of ICTs in supporting learners experiencing learning difficulties, which is the focus for this study. The researcher found it fit to explore the use of computers, cell phones, tape recorders, talking pens and talking books to support learners in the intermediate phase of the primary school, based on their successes with regard to other learning difficulties. These are discussed further in the next section.

2.7 ICTs AS A SUPPORT MECHANISM

Development of ICTs and educational software was influenced by the views of the two major theories of learning, which are behaviourists' views by the work of American psychologist B.F. Skinner and the constructivist views in the works of the psychologists Piaget, Vygotsky and Gestalt (Schunk, 2004: 24). For the purpose of this study, only constructivists' views are considered, especially Vygotsky's socio-cultural theory that posits the provision of socially rich environments in which learners can explore knowledge domains with their fellow learners, teachers and outside experts. ICTs can be used to support the learning environment by providing tools for discourse, discussions, collaborative writing, and problem-solving. Vygotsky's theories of tool use, speech development, social interaction and learning (Vygotsky, 1978: 18) provide a way to understand the relationship between the mechanistic aspect of ICTs, the development of literacy, fluency and integration of ICTs, the formation of social relationships as a result of these activities, and the learning that occurs as a consequence of such engagement.

According to Schunk (2004: 12), before applying any support mechanism to a learner who experiences learning difficulties one needs to acknowledge that not each one learns in the same way. This means that if the teacher chooses just one style of teaching (for example, direct instruction, collaborative peer-learning or inquiry learning) the learners will not be maximising their learning potential. Clearly, the teacher will not reach every learner by using only one teaching style, but implementing a variety of teaching styles will allow learners to match with their learning styles. ICTs are excellent tools for repetitive, didactic teaching and individual learning pathways which can quickly be constructed and monitored; hence the researcher finds it suitable for use as support mechanism for learners experiencing reading difficulties (Dettori & Persico, 2011: 3).

There is significant evidence that integration of ICTs into the classroom changes the process and nature of learning, even though there is less comprehensive and rigorous evidence of ICTs directly linked to improving learning outcomes (Comber, Brunson & Green, 2008: 198). However, Reynold (2001), Weaver (2000) and Wenglinisky (1998) produced a large scale of quantitative studies indicating that ICTs produce a statistically significant difference in learning outcomes on standardised tests of Language, Mathematics and Science. Their studies also indicated a close connection between schools with better ICTs resources and better grades. Based on the evidence of these studies the

researcher chose ICTs as a support mechanism for learners experiencing reading difficulties.

Leask and Pachler (2005: 213-115) provide an overview of the history and processes of systemic reviews on effective ICTs practice by highlighting studies that were examined between the years 2000-2003, of which yielded positive findings that led the researchers to conclude that ICTs are promising tools for addressing reading difficulties. They also stressed the ability of experiential learning which is learner centred in ICTs, to develop a variety of learning skills, including addressing learning difficulties.

Despite the aforementioned positive aspects about ICTs, Gamble (2000: 4) raises the fear that ICTs cause children to spend more time playing with computers and video games. Furthermore Birkets (1995) raises a concern about its threat to verbal articulation and mental passion that is nurtured through sustained reading. The concerns raised were that children are unable to concentrate or focus on the written word or engage in a more reflective approach to text. That gave rise to the question of whether ICTs such as computers, mobile telephones, Internet games consoles, wireless pocket organisers and ubiquitous digital television herald the disappearance of the literate child or the beginning of an era of new broader literacy. A study that was undertaken, at Deakin Universty, by Blackmore, Hardcastle, Bamblett and Owens in 2003, indicating that ICTs can enhance learning, particularly high order thinking skills, independent learning and self-paced learning, through the use of multimedia. They indicated that the research focuses on ICTs in general and has shifted away from infrastructure, access and technical issues to how it can enhance learning. The researcher finds it fit to explore other perspectives on the use of ICTs globally, nationally and locally.

2.7.1 Global, national and local perspectives on the use of ICTs in addressing reading difficulties

ICTs form part of a rapid evolution towards a global, knowledge-orientated economy and information society, as described by Plomp, Anderson, Law and Quale (2009: 4), and acknowledged by policy analysts and social scientist around the world. However, experts disagree on projections for the speed of this transition. Education policy decision-makers in most countries have adopted the rhetoric of the 'information society' and argue for the inevitability of rapid social change brought by the ICTs. Reports released by UNESCO

and the World Bank in 1999 and 1998 respectively projected major social changes from the global information economy. Both reports recommended special attention be paid towards mechanisms for lifelong learning using ICTs.

The group of eight (G8) summit held in Okinawa, Japan in 2000 became the first major summit to address the challenges of ICTs in education. The delegates from Canada, France, Germany, Italy, Japan, Russia, United Kingdom, United States and European Union issued a statement known as the Okinawa charter on Global Information Society. In 2006 the G8 adopted recommendations from the European Commission to improve international mobility and promote lifelong learning by reaffirming commitment to the Education for All Fast Track Initiative, as part of its Millennium Development Goals (MDGs) (Rizvi, Engel, Nandyala, Rutkowski, D & Spark: 2005).

The MDGs were explained in detail in Chapter 1, and are supported by the studies discussed by Plomp et al. (2009: 5) that investigated the nature of ICTs in education, the extent to which they are being used in education, innovative pedagogical practices that use them, understanding of what sustains these practices and what outcomes they produce. They based their discussions on the Second International Technology in Education Study (SITES) which was initiated in 1997 by the International Association for the Evaluation of Educational Achievement (IEA), in which nearly 30 countries took part between the years 1997-2008. Among the conclusions drawn from the SITES's findings, indicated that across the participating education systems there were changes that the use of ICTs had brought teaching and learning. Those changes strengthened the 21st century orientation to them, with the extent to which they are used, dependent on national curriculum policies.

Because in most instances, as indicated above, dependence is on the use of ICTs in national curriculum policies, the research suggests that the effects are generally positive. Florian (2004:7) argues that there are different effects for different types of learners or group of learners. For this study the focus was on the Intermediate Phase (Grades 4-6) learners experiencing reading difficulties because they are in the second phase of schooling, but if supported well they might perform optimally during their fourth (last) phase. That can also give them ample time to learn to use ICTs not only for reading. The New London Group as cited by Blackmore et al., (2003: 4) suggests that knowledge-based economies will require multi-literacies that include information literacy which is vital for participation in the growing economy of every country. Information literacy is the

appropriate and meaningful use of ICTs that involve accessing and processing resourcing and communicating with the world.

Lou, Abrami and d' Apollonia (2001: 510) found that learner characteristics have an effect on learning with ICTs, and teachers are in a good position to determine how ICTs can best be used to support learners to learn and participate fully in classroom life. Similarly, Florian (2004: 10) points out that application of ICTs by teachers must start with the teacher and the kind of learning they seek to foster. She points out that ICTs can be used to tutor or to explore, and can be applied as tools that are used to communicate. The researcher then concludes that ICTs can benefit intermediate phase learners as they give an opportunity to experiment, explore and play. ICTs can meet various individual needs of the learners in the classroom, particularly those with different learning styles. They are catering for all the modalities, including the auditory, visual and kinaesthetic modalities (Satya, 2008: 191).

In South Africa, the DoE in 2004 drafted a White paper on e-Education: Transforming Learning and Teaching through Information and Communication Technologies. The White Paper supports the introduction of the NCS to equip learners with the knowledge, skills and values necessary for self-fulfilment and meaningful participation in society.

The aforementioned bring us to the focus of this study, which is ICTs as a support mechanism for supporting learners experiencing reading difficulties. Westwood (2011: 132) cited a study by Cooney and Hay (2005) which revealed that structured use of the Internet as a medium for applying and practicing reading skills was very effective in middle school, with improvements in reading achievements, engagement rates and attitudes. He further highlighted that studies had indicated that learners with reading difficulties could gain much from using *text-to-speech* (TTS) software, with its combined visual and auditory presentation. This is also indicated by Gamble and Eastwood's (2000) study which indicated that the most used ICT to support reading difficulties was *talking books*, due to their connections to a traditional literacy model using conventions associated with reading books such as turning pages and a narrator's voice. A study by Gibson (2009) revealed that a computer programme, *Read Naturally*, was effective in increasing oral reading fluency and comprehension standard in First Grade learners.

In contrast, Westwood (2011:132) sees computer programmes as focussing on comprehension application and reading to learn rather than learning to read. He found that learners experiencing reading difficulties are often limited in their ability to use ICTs. Wilson (2012:105) described the opportunities that ICTs offers succinctly, indicating boundaries between the different aspects of ICTs as distinct. They gave examples of using TTS, word banks, subject specific words and on-screen grids for learners to access words they need, as well as a small hand-held reading pen that enables learners with reading difficulties to scan a word and have it read to them by holding the pen next to their ear as with a telephone. Activities such as whole group instruction using computers promote cooperative learning and continuing fascination and frequent use of ICTs. The main aim of addressing reading difficulties is to enable learners to read fluently, read with comprehension and read to learn.

2.8 CONCLUSION

The literature that was reviewed in this chapter formed a foundation for this study in clarifying reading approaches and mechanisms used to address reading difficulties. It has been evident from the research made by Ashton-Townsend (2007), Dednam (2007), Lerner & Kline (2006), Sousa (2005) and Bender (2004) that all learners have different learning styles. As a result, when they are given support these learning styles should be taken into consideration. Based on the literature it is evident that ICTs have the potential to cater for the different learning styles of the learners, in particular those experiencing reading difficulties.

The researcher's experience and view as a teacher and Educational Specialist supporting learners experiencing barriers to learning, including those who experience reading difficulties on the use of ICTs, is that they offer the potential of skills reinforcement due to repetitive drill and practice, as well as allowing learners to take control of the devices and their own learning. ICTs allow cooperative and peer learning, practice by doing and audio-visual learning, which is in line with inclusive education principles.

Issues that may affect the use of ICTs, such as socio-economic issues, cultural and language diversity, and gender, were not explored in this chapter but will be discussed in Chapter 4, in which data is analysed. The following chapter (3) outlines the research methodology of this study.

CHAPTER 3

RESEACH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research paradigm, and research design applied in this study, for the purpose of addressing the main aim which was outlined in chapter one. This is done also to complement the literature reviewed in chapter two. The chapter also outlines the nature of the population and sample selection method that was used and detailing information on validity and reliability.

Through the qualitative approach as indicated in chapter one, the researcher aimed to investigate the use of ICTs as part of support mechanisms to improve reading skills of learners experiencing reading difficulties. Researchers such as Fouché and Delport (2011: 61-70) and Welman, Kruger and Mitchel (2011: 8-9) refer only to two research approaches, qualitative and quantitative, whilst Creswell (2007: 27) added a third, mixed, as a mixture of the two. The reason for using a qualitative approach for this study was that the researcher needed a complex and detailed understanding of the use of phenomenon (Creswell, 2007: 40). This detail could only be gained by talking directly with the teachers, observing them in the classrooms and allowing them to relate their experiences unencumbered by what the researcher expected to find or read in the literature. Furthermore, the researcher wished to encourage teachers to share their stories, hear their voices, and minimise the power relationships that existed between the researcher and the participants in the study. Supporting this, Durrheim (2010: 47) indicates that the qualitative approach allows the researcher to study selected issues in depth, openness, and detail as they identify and attempt to understand the categories of information that emerge from the data. Welman et al. (2011: 188) describe the qualitative approach as an umbrella phase covering an array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning of naturally occurring phenomena in the social world. Fouché and Schrink (2011:308) and Babbie and Mouton (2003: 53) maintain that the qualitative researcher is concerned with understanding (*vertehen*) rather than explanation.

According to Myers (2010: 22) and Creswell (2009: 173), a qualitative research project consists of five essential building blocks or steps, that is i) a set of philosophical

assumptions/paradigm; ii) the research method; iii) one or more data collection techniques; iv) one or more approaches to qualitative data analysis; and v) a written record of the findings. Based on these, the researcher found it fit to shape this study by bringing the paradigm to provide a foundation towards this study. In the next section the research paradigm is discussed in order to shed more light on the reason for selecting the qualitative approach.

3.2 RESEARCH PARADIGM

The term ‘paradigm’ was defined and described in chapter one and Interpretivism was selected. Other reasons that led the researcher to select Interpretivism were the fact that it is a set of assumptions or beliefs about fundamental aspects of reality that give rise to a particular worldview (Nieuwenhuis, 2011: 47). On the other hand, Terreblanche and Durrheim (2010: 6-7) define paradigm as a common-sense understanding of science, emphasising it as an all-encompassing system of interrelated practices and thinking that defines the nature of the enquiry for researchers. They identified three paradigms, i.e., positivist, interpretive and constructivist, through three dimensions, namely, i) *ontology*, which specifies the nature of research; ii) *epistemology*, which specifies the relationship between the researcher and what can be known; and iii) *methodology*, which specifies how researchers may go about practically studying whatever they believe can be known. With a similar view, Myer (2010: 23) define paradigm as a philosophical perspective identified as positivist, interpretive and critical. For the purpose of this study the researcher concurs with Terreblanche and Durrheim, and Myer, in selecting *interpretive* as the paradigm for this study.

An interpretive paradigm, according to Terreblanche and Durrheim (2010: 6-7), relates to the internal reality of subjective experience, while for Myer (2010: 39), interpretive researchers assume that access to reality is only through social constructions such as language, consciousness, shared meaning and instruments. The aforementioned relate to this study in the sense that language was identified as one of the aspects of reading during the literature review in Chapter 2, and the relevance to ICTs lies in the researcher’s view of them as the instruments. The researcher aimed to access the reality of supporting learners with reading difficulties through these two social constructions that is language and ICTs. Babbie and Mouton (2001: 28) added that in an interpretive paradigm all human beings are engaged in the process of making sense of their worlds and continuously interpreting,

creating, giving meaning, defining, justifying and rationalising daily actions. This study is mostly influenced by the interpretive paradigm as it provides a pervasive lens through which perspectives on aspects of qualitative research may be viewed (Creswell, 2007: 24).

3.3 RESEARCH DESIGN

Qualitative research design was also described in chapter one and phenomenology was selected as a plan for how the researcher intends to conduct this study. The selection was made among five qualitative designs namely: ethnography, grounded theory, case study, phenomenology and narrative as described by Fouché and Schurink (2011: 312-322). Niewenhuis (2011: 70) describes research design as the strategy which moves from the underlying paradigm to specifying the selection of participants, data collection, techniques to be used and data analysis to be carried out. Similarly, Durrheim (2010: 34) sees a research design as a bridge between research questions and the execution or implementation of the study. He added that it is a plan that guides arrangement of conditions for collection and analysis of data.

In addition to the reasons given in chapter one for the selection of phenomenology in this study, is because it allows for the studying of a reality with so-called objectivity (Welman, 2005:191). It focuses on people's subjective experiences and how they construct the social world by sharing meanings, as well as the ways in which they interact with or relate to each other. Another reason for the selection of phenomenology is that it relates to socio-cultural theory, which informs the theoretical framework for this study. Lindegger (2010: 463) indicates that phenomenology is concerned with human experience and the way in which phenomena are experienced by human beings. Furthermore, in the context of this study ICTs as a phenomenon were explored, particularly how learners and teachers experience them, and how they use them to interact and perform other activities such as addressing reading difficulties.

Phenomenology, according to Niewenhuis (2011: 59), focuses on people's social context that may lead to a greater opportunity to understand their perceptions. Babbie and Mouton (2003: 28) view a phenomenologist as a person who continuously interprets, creates, and gives meaning to define, justify and rationalise actions, while Creswell (2009: 13) maintains that phenomenological design is a strategy of inquiry in which the researcher identifies the essence of human experiences about a phenomenon as described by

participants. The researcher aimed to understand the experience of teachers in using ICTs to support learners experiencing reading difficulties.

3.4 POPULATION AND SAMPLING

Population, according to Babbie and Mouton (2003: 175), is the theoretically specified aggregation of study participants from which a sample is actually selected. Strydom (2011: 223) defines it as individuals in the universe who possess specific characteristics, and cites McBurney (2001: 248), for whom a population is the totality of persons, events, organisation units, case records or other sampling units with which the research problem is concerned. Welman's (2005: 52) definition of population is a full set of cases from which a sample is taken.

This study was conducted from a qualitative interpretive perspective, as the researcher wished to make sense of experiences of teachers using ICTs in the classroom. Participants were selected by means of non-probability purposive sampling as only teachers who were involved in the support of learners experiencing barriers to learning were holders of the data needed for this study (Nieuwenhuis, 2011: 79). Creswell (2007: 125) agrees with Nieuwenhuis that in purposive sampling the researcher selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon of the study. In probability sampling, the odds of selecting a particular individual are not known because the researcher does not know the population size or the members of the population (Gravetter & Forzano, 2003: 118, in Strydom & Delpont, 2011: 390). In this study, the population comprised individuals who conformed to specific criteria and to which the researcher intend explore their experience of using ICTs for supporting learners experiencing reading difficulties

In a phenomenological study the sample includes individuals who have experienced the phenomenon (Creswell, 2007: 125). Durrheim (2010: 49) describes a sample as participants who are selected from the population as representative of the population about which the researcher aims to draw conclusions. A 'sample', according to Strydom (2011: 223), is a subset of the population considered for actual inclusion in the study, while 'sampling' refers to the process used to select a portion of that population. Nieuwenhuis (2011: 79) refers to sampling as the process used to select a portion of the population for study while Durrheim (2010: 49) defines it as the selection and representativeness of participants from the entire population.

The researcher thus construes sampling as a process of selecting group participants who represent the target population. In this case the School Based Support Team (SBST) members and Learning Support Educators (LSEs) were purposefully selected as participants due to their role of providing support to learners experiencing barriers to learning, including those who experience reading difficulties. Six members of SBST from each primary school selected formed part of focus group interviews and four LSEs were part of one-on-one individual interviews. Two primary schools in Tshwane South District with *Gauteng Online* laboratories were also selected, because a variety of ICTs are found there which are used for teaching and learning activities.

3.5 DATA COLLECTION

Data in phenomenological studies is collected from the individuals who have experienced the phenomenon, and studies often consist of in-depth interviews and multiple interviews with participants. Other forms of data may also be collected through observations, journals, art, poetry, music and other forms of art. Also used are interviews, documents and audio-visual materials, as qualitative, phenomenological methods of collecting data (Creswell, 2007: 61, Creswell, 2009: 178-181). For Ivankova, Creswell and Clark (2011: 259), in qualitative research, the researcher serves as an instrument of data collection through individual and focus group interviews, observations, documents, audio-visual material and artefacts. The researcher chose to collect data as recommended by Kelly (2010: 287), that is, through getting to know the phenomenon in its real context and applying interpretive beliefs that prevent the researcher from disturbing the context unduly, but which allow her to become a natural part of the context in which the phenomenon occurs. Data for this study was collected through individual interviews, focus group interviews and observations.

3.5.1 Interviews

Interviews are the most commonly used source of data for interpretive research, and in the interpretive paradigm are seen as a means of finding out how people really feel about or experience particular phenomena (Kelly, 2010: 297). Niewenhuis (2011: 87) defines an interview as a two-way conversation in which the researcher collects data and learns about the ideas, beliefs, views, opinions and behaviours of participants. He describes the aim of qualitative interviews as being to see the world through the eyes of the participant. Babbie and Mouton (2003: 289) also define the qualitative interview as an interaction between the

interviewer and participant in which there is a general plan of inquiry, but not in a strict order. They maintain that qualitative interviews are essentially a directed conversation that pursues specific topics raised by the participant. For this study, interviews were used to collect empirical, rich data and unfold the meaning of teachers' experiences in using ICTs as a support mechanism.

Myers (2010: 123-124) and Creswell (2007: 130) classify interviews into three basic types: structured, that use pre-formulated questions and require considerable planning beforehand to ensure inclusion of all the important questions; ii) semi-structured, that use some pre-formulated question but no strict adherence to them; and iii) unstructured, that use few if any pre-formulated questions, but in which participants are free to say what they wish. In this study, semi-structured one-to-one and focus groups interviews were employed in order to gain a detailed picture of participants' beliefs, perceptions or accounts of the use of ICTs. The researcher was able to follow up particularly interesting avenues that emerged during the interviews, and the participants were able to provide a fuller picture (Creef, 2011: 351-352). The researcher determined the setting which prevented the participants from being hesitant about speaking and encouraged them to share their ideas and so avoid providing less than adequate data. This was done by finding participants who were best qualified in terms of the research question of this study, always clarifying the aim to them, avoiding questions that might require 'yes or no' answers, and being a good listener (Nieuwenhuis, 2011: 88).

Focus group interviews were conducted to enable participants to build on each other's ideas and comments to provide an in-depth view not attainable from one-on-one interviews (Nieuwenhuis, 2011: 90). A focus group, according to Kelly (2010: 304), is typically a group of people who share similar types of experience. The researcher was able to explore unexpected comments and new perspectives easily within the focus group, thus adding value to the study. Myers (2010: 125) regards the purpose of focus group interviews as being to seek collective views on a defined topic of interest from a group of people who are known to have had relevant experiences. Six SBST members from each of the two selected schools formed part of the focus group interviews and a funnel structure was used whereby the researcher started with a broad and less structured set of questions to ease the participants into the situation. The focus group were managed by forming a circle, which the researcher walked around to ensure that all participants were involved (Babbie &

Mouton, 2003: 292). Probing questions were asked to steer the participation or to clarify aspects, but the researcher remained mostly in the background.

For all the above mentioned interviews selected, audio-recording was used with permission from the participants, to restore the authenticity of the data. Note-taking was also used to capture non-verbal responses. The interview schedule was designed (attached as Appendix E) to guide the researcher and to minimise irrelevant data. An interview schedule provides the researcher with the pre-determined questions that might be used as an appropriate instrument to engage the participants (Creef, 2011: 352).

3.5.2 Observation

Observation entails a person watching other people from the outside, for example, attending a meeting of a company and watching as an observer without taking part in the activities (Myers, 2010: 138). As defined by Niewenhuis (2011: 83-84) it is the systemic process of recording the behavioural patterns of participants, objects and occurrences, without necessarily questioning or communicating with them. He further outlined four types of observer, namely *complete observer*, that is a non-participant looking at the situation from a distance; *observer as participant*, one who gets into the situation but focuses on his/her role as observer; *participant as observer*; one who becomes part of the research process; and *complete participant*, one who becomes completely immersed in the setting. Babbie and Mouton (2003: 293) state that, in qualitative research, usually there are two types of observations, namely *simple*, in which the researcher remains an outside observer, and *participant*, in which the researcher is a member of a group he/she is studying. Kelly (2010: 310) distinguishes between four types of observations, namely *participant*, in which the researcher participates in the setting being studied; *descriptive*, in which only general questions are being asked; *focused*, that involves more particular or well-honed questions for a particular kinds of interaction; and *selective*, which involves the selection of particular events for which there are specific questions.

In this study the researcher was a complete observer, as described by Niewenhuis, aiming to gain deeper insight and understanding of the phenomenon being observed. Complete observation was used mainly to help the researcher build a relationship with the participants and collect data with ease. Observations were made of how teachers support learners experiencing reading difficulties using different support mechanisms, including ICTs. Data from observations was also recorded through questions asked to clarify what

the researcher was observing. Field notes were kept and reflections made on the observations as the events took place (Nieuwenhuis, 2011: 88).

3.6 DATA ANALYSIS

The collected data was analysed qualitatively, referred to by Creswell (2009: 183-184) as analogous to peeling back the layers of onion. It was carried out by representing the data, and making the interpretation of the larger meaning of it. Data analysis, as defined by Schurink, Fouché and De Vos (2011: 397-399), is a process of bringing order, structure and meaning to the mass of collected data. They also view it as a process of inductive reasoning, thinking, and theorising, far removed from the structured, mechanical and technical procedures used to make inferences from empirical data. Creswell (2009: 183) defines it as a continuing process that involves reflection about the data, asking analytic questions, and writing memos throughout. Myers (2010: 166) views qualitative data analysis as a way of transforming data into something meaningful to the researcher and for the intended readership.

In this study, data analysis was based on an interpretive paradigm that aims at examining meaningful and symbolic content of qualitative data (Nieuwenhuis, 2011: 99). This was carried out by establishing how participants made meaning of the use of ICTs through analysing their perceptions, attitudes, understanding, knowledge, values, feelings and experiences in supporting learners experiencing reading difficulties. The researcher also focused on the analysis of significant statements, the generation of meaning units, and the development of essence description as done mostly by phenomenological researchers (Creswell, 2009: 184). Such researchers, according to Schurink et al. (2011: 403), Creswell (2009: 185-189) and Welman et al. (2005: 211-219), analyse data through various systemic steps. Schurink, et al., identified three, Creswell six, and Welman four steps. The researcher identified more with Creswell but combined these with Schurink and Welman to make the seven steps which are outlined in figure 3.1 below:

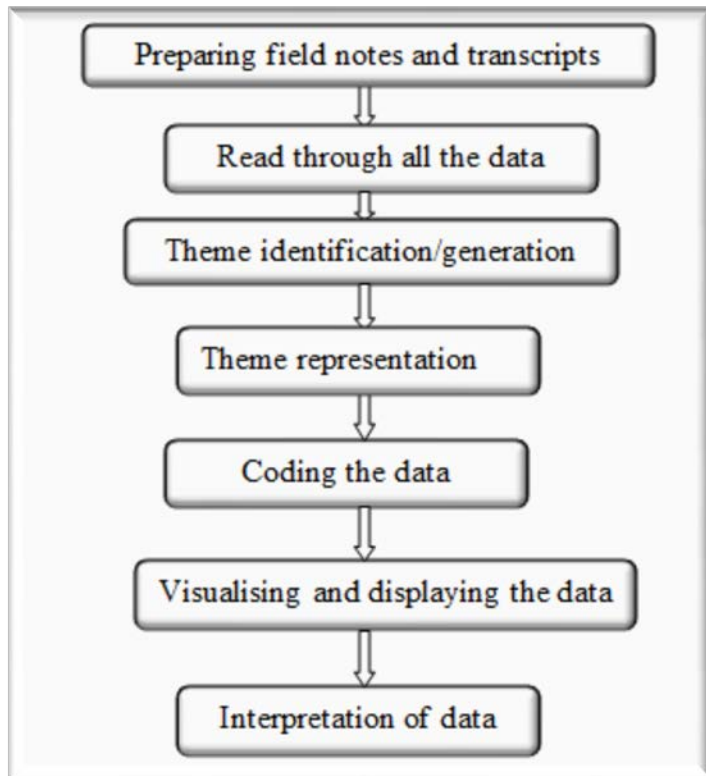


Figure 3.1: Seven steps of analysis, adapted from Schurink et al. (2011); Creswell (2009); Welman et al. (2005)

The researcher used the steps as guidelines when analysing data, but did not follow them rigidly, as a ‘recipe’ (Schurink et al., 2011: 403), as some of the steps overlap. The data analysis process began with conversion of the raw field notes into write-ups that were easy to read, and which were then edited for accuracy, commented on, and analysed. The process of reviewing raw field notes stimulated the researcher to remember words said at the time of the interview but which were not included in the original notes (Welman, 2005: 211). Write-ups were used to replace some of the missing content, keeping in mind the research questions as Schurink et al. (2011: 402) advised. The researcher then transcribed the tape recordings with the help of professional transcriber using Vivo program, taking into consideration mispronunciation and incomplete sentences, referring to the summative notes of key aspects of conversations.

The data was read and re-read, and audio recordings played and re-played in order to become familiar with them and reflect on the overall meaning (Creswell, 2009: 185, 2007: 61). During these processes the researcher and the transcriber were trying to identify and generate themes, but difficulties arose because participants gave various supporting conditions and mechanisms (illustrated in section 4.5), indicating their difference in

implementing inclusive education for learners experiencing reading difficulties. The transcriber advised on the use a matrix (section 4.2) to make it easier to code the data. Findings were conveyed in narrative format as discussions of five themes derived from the coding process. Finally, an interpretation was made in order to work towards the answering of the research question.

3.7 TRUSTWORTHINESS AND CREDIBILITY

Trustworthiness is obtained through a process of testing the data analysis, findings and conclusions (Nieuwenhuis, 2011: 113). It includes the use of multiple data sources such as interviews, observation, and documents, verifying raw data, keeping notes of research decisions taken, using multiple coders, especially when high inter-coder (consistency among different coders) and intra-coder (consistency within single coder) reliability is obtained. It also includes participant or member checks, verifying and validating findings by providing copies of a draft report to the participants, controlling for bias, avoiding generalisation by seeking to understand from participants' perspective, choosing quotes carefully, maintaining confidentiality and anonymity, and stating the limitations of the study upfront.

Schurink et al. (2011: 420) support the above by outlining various strategies for increasing trustworthiness and credibility, including triangulation, which they defined as the use of multiple sources of data to corroborate, elaborate or illuminate the study. Triangulation in this study is evident due to the use of data collected from the literature review, interviews and observations. The aforementioned data sources were used to strengthen the study's usefulness (Schurink et al., 2011: 420).

3.8 ETHICAL CONSIDERATIONS

Ethical considerations, according to Welman (2005: 181), are an important part of the research, especially when it involves human subjects. Strydom (2011: 113) notes that they are pervasive and complex since data should not be obtained at the expense of human beings. He also indicates that human beings are objects of study that raise unique ethical problems. The researcher agrees with both authors and avoided ethical lapses by adhering to the principles of informed consent, voluntary participation, explicit confidentiality and anonymity agreements, and application of a rigorous analytical process to ensure that

trustworthy conclusions were drawn (Wassenaar, 2010: 76). The researcher, as part of adhering to the ethical issues, applied for permission to conduct the study as follows:

- Application for permission to the GDE (because the study was conducted in schools in Gauteng), to conduct research in the two identified schools in Gauteng. Permission was granted. The approval letter is attached as Appendix A
- Application to UNISA Ethics committee for ethical clearance was also made before data collection. An ethical clearance certificate is attached as Appendix B
- After obtaining the ethical clearance certificate, letters were issued to the principals of identified schools to gain permission (see Appendix C).
- Before the interviews and observations, participants were requested to complete consent forms (Appendix G).

3.9 CONCLUSION

This chapter has focused on the description and discussion of the research methodology, including the paradigm, approach and design used to collect data in this study. Population and sampling procedures were also discussed. Lastly, details of data analysis, trustworthiness and ethical consideration were presented. In the next chapter, the findings of the collected data are presented and discussed.

CHAPTER FOUR

PRESENTATION OF FINDINGS AND DISCUSSIONS

4.1 INTRODUCTION

Having outlined the research design and methodology in Chapter Three, this chapter presents the findings of the qualitative, phenomenological design which resulted from the data collected from structured focus group interviews, individual interviews and observations. Collection of data was through interview, observation and questions, prepared during the application for ethical clearance (Appendices A-H). As indicated in Chapter Three, the data was analysed following six steps outlined by Creswell (2009: 185-189, 236), as preparing and organising data, exploring and coding data, describing findings and forming themes, representing and reporting findings, interpreting their meaning and validating their accuracy. However, these steps were not followed sequentially as they are listed because some overlap, for example coding and forming themes were carried out simultaneously.

4.2 ANALYSIS OF DATA

In view of the above, the data needed to be prepared and organised immediately after collection. Creswell (2012: 238) indicates three forms of organising data, namely developing a matrix or a table, organising by type or participants, and keeping duplicate copies of all forms of data. Welman, Kruger and Mitchell (2011: 219) share the sequence but focus on the two forms of matrix display and network display. The researcher chose matrix because participants gave various supporting conditions that indicate their difference in implementing inclusive education regarding learners experiencing reading difficulties, in a table of sources that can be used to help organise the material (Creswell, 2012: 238). Welman et al. (2011: 219) define matrix as a data display format that enables the researcher to understand the flow of events and their connection, whilst for Nieuwenhuis (2011:111) it is a useful way to both find and show a relationship in the qualitative data. In this study matrix was chosen to help organise data, condense it into simple categories and to summarise what the participants said or did, as themes were not easily identified or not emerging easily. Figure 4.1 (below) illustrates the matrix that was described above.

Combination Matrix	Totals	FG 2	FG 1	Ind 1	Ind 2	Ind 3
Challenges						
Access to resources slows the teaching process down	6	6				
Adaption to mainstream	1					1
Can analyse but they can't put it back together	1					1
Children from rural or township areas	1					1
Taught in home language	1		1			
Uneducated or less educated	6		1			5
Children with no parents	1	1				
Emotional problems	3	1				2
Class size not conducive to immediate support	5		3	2		
Communication from previous teachers	1	1				
Connecting visual with auditory	2		2			
Curriculum is too tight for our learners	4	3				1
Difference in learning and teaching between township school and suburban	2	2				
Individual attention - everybody stops working	1		1			
Knowledge on how to use ICT's	2			2		
Lack of available ICT's	6	6				
Lack of psychologist at school	1					1
Language barriers	3		2		1	
Children from rural areas	1				1	
English not the first language	1			1		
Foreign languages	5	1	2			2
Other official South-African languages	4		2			2
Teaching language is not mother tongue	1				1	
Language used on cell phones	2				2	
Late identification	3			3		
Limited vocabulary	10		4	2		4
Multi-faceted challenges	8	1	3	1	2	1
Neglect	1			1		
No formal remedial class in senior phase	2	2				
Parental involvement and support	5		2			3
Passive viewing to learning viewing	2	1	1			
Phonetics	10	2	3		3	2
Placing to mainstream unseccessful	1					1
Psycho-social problems	1			1		
Reading matter are not differentiated	2			2		
Resources	1			1		
Rudeness towards students who struggle	4		2			2
School does not have hall	2	2				
Teachers feel constrained or helpless	5	4	1			
Feelings of helplessness	4		2			2
Space constraints	2	1	1			
The need is too big, too many children	2					2
Time constraints	12	5	2	1		4
Think in their own language	1		1			
Training support for teachers on ICT's	1				1	
Transport to extra classes	1			1		
Understanding	7		2	2		3

Figure 4.1: Matrix

Data was transcribed and coded using both the matrix and text transcripts (Appendix J), with different colours used to denote similar categories that were then grouped together (Appendix J). Four themes emerged from the organised and transcribed data and colour-coded categories, some of which coincide with the literature reviewed in Chapter Two, though not anticipated by the researcher. Figure 4.2 (below) illustrates how the data was organised and condensed into themes.

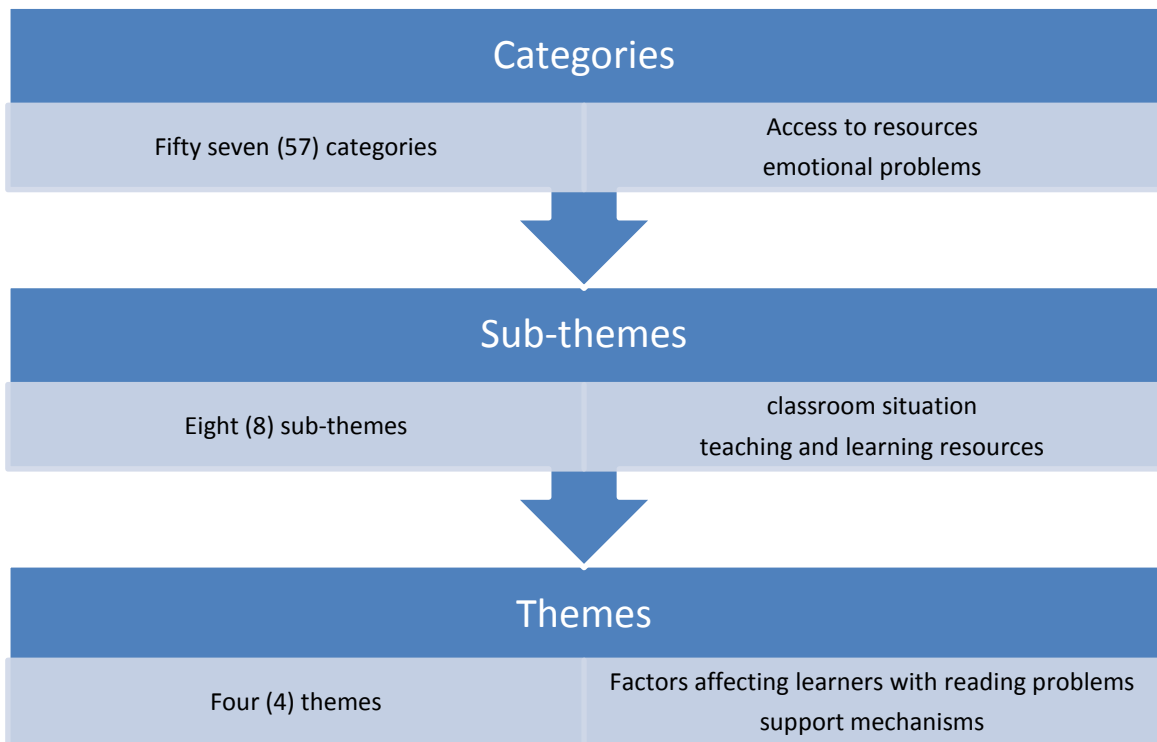


Figure 4.2: Data organisation

Not all the categories, sub-themes and themes were included, only two examples of each. The other categories, sub-themes and themes were integrated in the findings discussed below. Appendix K illustrated all four themes, eight sub-themes and 57 categories.

4.3 DESCRIPTION OF PARTICIPANTS

Teachers who serve on SBST and LSEs provide support to learners experiencing reading difficulties and other barriers to learning. SBST and LSE were described in detail in section 1.3 of Chapter One.

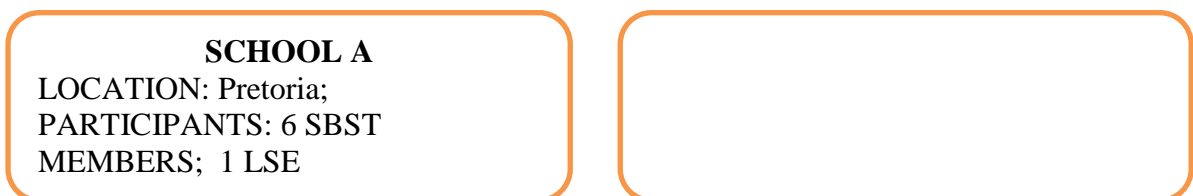


Figure 4.3: Descriptions of participants

4.4 DESCRIPTION OF DEMOGRAPHICS

The demographics of the two schools were as follows.

4.4.1 School A

A primary school in Pretoria Central, starting from Grade 1-7, School A is an ordinary primary school with a class for learners with barriers to learning, of which reading difficulties is one, led by a teacher who is a member of SBST. Language of Learning and Teaching (LOLT) in this school is English and it accommodates learners from the nearby townships, the mother tongues of which are Zulu, Tswana, Venda and Afrikaans. There is a remedial teacher stationed at the school and the LSE seldom visit the school because she services 20 other schools in the cluster. The school has a reading centre in which learners with reading difficulties are supported with ICTs and other mechanisms. Observations were made at the reading centre on how the ICTs were used to support them.

4.4.2 School B

An ordinary primary school in Mamelodi Township, School B is situated east of Pretoria, admitting learners from Mamelodi and Eesterust comprising mainly a mixed race ('coloured') population. The LOLT at the school is English, but all learners are English second language speakers, their mother tongue being Sepedi, Setswana, IsiZulu, Afrikaans and Tsonga. There is an LSE, who is stationed at the school.

Participants in the focus groups of both schools were given names to ensure anonymity: Teacher A – Teacher F, and the LSEs as LSE1 and LSE 2. The description of findings below contains quotes from participants with their names abbreviated, for example Teacher A = TA. School A was represented by Focus Group 1 and school B was represented by Focus Group 2.

Focus Group 1 = FG1
Focus Group 2 = FG 2
Teacher A= TA
Teacher B=TB
Teacher C =TC
Teacher D = TD
Teacher E = TE
Teacher F = TF
LSE 1
LSE 2

Figure 4.4: Abbreviations used for participants

4.5 DESCRIPTION OF FINDINGS

Data was evaluated for its usefulness in illuminating the research questions, by considering events that did not occur, aspects of which the participants were not aware, aspects that they wanted to hide, and conscious non-reporting (Shurink, Fouché & De Vos, 2011: 416). Table 4.1 (below) illustrates how the themes emerged, the researcher first having identified the categories, followed by the sub-themes then themes. The description of the findings was made in the opposite way, starting from the right hand side of the table with the theme and reading to the sub-theme and categories on the left hand side. This table does not indicate all the categories, sub-themes and themes, but a full table is attached as Addendum 4.6.

Table 4.1: Summary of emerged themes

CATEGORIES	SUB-THEMES	EMERGED THEMES
<ul style="list-style-type: none"> • Access to resources slows the teaching process down • Adaption to mainstream • Can analyse but they can't put it back together 	<ul style="list-style-type: none"> • Language • Classroom situation • Teaching and learning resources 	<ul style="list-style-type: none"> • Factors affecting learners experiencing reading difficulties
<ul style="list-style-type: none"> • Classroom observation • Combining perceptual, visual and auditory • Develop strategy to bridge problem area • Group according to abilities 	<ul style="list-style-type: none"> • Support inside the classroom • Support outside the classroom 	<ul style="list-style-type: none"> • Supporting learners with the reading needs

The first question asked during the interviews was: *“How do you deal with the needs of all learners experiencing reading difficulties in your classroom?”* The participants responded that before providing support or making sure that all learners were accommodated in the classroom they conducted a needs analysis, discussed below.

4.5.1 Needs analysis

The needs analysis was a process of identifying, gathering and interpreting information about the learners' achievement, as measured against nationally agreed outcomes for a

particular phase or grade (Bouwer (2007: 46-47). For Bornman and Rose (2010: 37), it enables the teachers to meet the learners' current and future educational needs. In the study it was viewed as a process of identifying the learner's needs so as to be able to provide a proper support mechanism. The participants referred to different ways of identifying learners experiencing reading difficulties, with LSEs mentioning GDE support forms as indicating the type of barrier or difficulty the learners experienced, the support mechanism the teacher used to support them learner and the outcomes of the support. The LSEs were able to recommend other support mechanisms that were not indicated on the forms.

Teachers who participated in the focus group interviews also pointed out their way of identifying, such as testing using a Chanel and Bert test, ICT spelling test, verbal testing, written test and comprehension test. Some used exercises such as auditory exercises that helped to differentiate between visual and auditory learners, phonemic awareness exercises, proofreading exercises and reading exercises that indicate the reading level of the learners:

“Let's say the child has a reading barrier. Then I would start with my scholastic assessment. I will assess the child starting with, because like if a child can't read the child - first of all we have to start with the sounds. Sounding of letters. Then phonemic awareness then I will start to see and I just make according to my test I will just make sure the child does understanding sounding the letters” (LSE:2).

These ways of identifying learners' needs are also mentioned by the DoE (2008: 12-13) and further indicate that a needs analysis allows teachers, parents and the SBST to decide whether or not a learner's additional support needs are as initially perceived, and whether or not these may be a concern for school or home improvement. They also help with the decision-making around the exact nature and extent of support needed.

4.5.2 Factors affecting learners experiencing reading difficulties

In section 2.5 of Chapter Two, possible causes of reading difficulties were described, which included social, environmental and developmental factors. in line with Ashton-Townsend, (2007) Jennings, Caldwell and Lerner (2006), and Sousa (2005), one of the possible causes identified was language processing, which featured strongly in the responses of the participants.

4.5.2.1 Language

Interestingly, SBST members during the focus group interviews and one LSE during the individual interview pointed to language as one of the factors contributing towards reading difficulties:

“Their English is very poor; the standard of communication is very poor. So it's very difficult to teach a child to read if they don't even have the - the ability to - to communicate with you” (TE: FG 1). “Um - the different needs that the learners have - um - based on the language” (LSE 2).

Chapman (2010: 21), Ashton-Townsend, (2007: 12) and Wearmouth, Solaer and Reid (2003: 3) share similar findings regarding language processing as a likelihood to be the cause of reading difficulties (section 2.5 of Chapter Two). One cannot discuss reading without mentioning language, and as Dednam (2007: 124) argues, reading is a language and all the language dimensions are involved when the learner learns to read.

These factors illustrated that language may become a barrier to reading as it affects the vocabulary and comprehension. Wilson, Nash and Earl (2010: 164-165) contend that difficulties with speech, language and communication reduce the ability to read and comprehend, whilst an all-party parliamentary group for education also reported that language can be a major barrier to reading, and that when a person speaks an unwritten language and is expected to learn to read in a language he or she does not understand, becoming literate can be a confusing and frustrating process. Many give up permanently, convinced that reading and writing are beyond their grasp. From the second focus group interview, Teacher C pointed out how their learners' vocabulary and comprehension are affected:

“In grade 6 the children are able to read but they are not always able to understand what they are reading Because as teacher D, said they have a limited vocabulary” (TC: FG 1).

Another aspect of language as a factor affecting learners experiencing reading difficulties was raised during the first focus group interview, when the SBST members were asked the question *“How do you deal with the needs of all learners experiencing reading*

difficulties?” They responded that most of the learners were taught in their home language in the foundation phase and when they entered the intermediate phase they were taught in English, at which point they came across words that they did not know, thus making it difficult for them to read. Most of the learners’ home languages or mother tongue were Sotho, Tswana, Zulu, Venda and Xhosa, but other learners were from Central African countries and so spoke French

“Yes. Ja, we do have foreign children - that come from Central Africa. Central African countries” TD: FG 1).

Chapman (2010:21) indicates that learners who speak languages other than English at home are less likely to have effective reading skills and they lack support of reading outside the classroom. For Mikulecky (2008: 2), reading, especially in the second language, requires a set of thinking skills and attitudes that grow out of spoken use of the language. This made it difficult for the learners in school A, because at home they spoke languages that were not their LOLT. Nel (2007: 152) includes reading difficulties amongst challenges faced by English Second Language (ESL) learners in schools, such as breaking up words into syllables, mispronunciation and poor comprehension.

LSE 2 raised another concern about the language that learners use to communicate in the short message service (SMS) of cell phones. She believed that this contributed to the reading problems, as the language is mostly abbreviated, confirming findings of Vosloo (2009: 1), who criticised ‘texting’ by referring to it as a corrupting form of language and degradation of spelling in youth. Vosloo cited Lenhart (2008), who noted that many teachers in South Africa are lamenting the problem of ‘text creep’ by which learners are unable to use appropriate language in different contexts. On the other hand, research by Motallebzadeh and Ganjali (2011: 1) into SMS as a tool for second language vocabulary retention and reading comprehension ability, demonstrated that mobile phones and SMS can facilitate certain forms of learning. As noted in Chapter Two section 2.7, Gamble and Westwood’s fears of the use of ICTs by learners were addressed by studies undertaken by Dettori and Persico (2011), Comber and Green (2008) and Leask and Pachler (2005), which found ICTs to be excellent tools for repetitive, didactic teaching and individual learning pathways that can quickly be constructed and monitored.

4.5.2.2 Classroom situation: early identification and support

The participants expressed concern regarding early identification and support of the learners experiencing reading difficulties, in particular overcrowding as one of the factors. During the observations the researcher identified that, in the classroom, teachers were faced with about 40 to 50 learners of whom some experienced reading difficulties. The challenge lay with identification. When asked the question: “*How do you deal with the needs of all learners experiencing reading difficulties?*” LSE 1 responded:

“Not easy in a classroom - in big classrooms. Not easy in - in - in the ... phase.”

She further mentioned that, if identified early, something could be done:

“..... Pertaining to reading in the first place, if it's diagnosed early enough ... I think it can be rectified.” (LSE 1)

Learners experiencing reading difficulties need to be identified early so that they can be supported in order to access education as all learners (DoE, 2008: 15-21). The Strategy on Screening, Identification, Assessment and Support (SIAS) stresses the importance of early identification of learners so as to provide the relevant support. Lundahl (2008: 3-21) also supports early identification of learners experiencing reading difficulties, highlighting that they can be given a structured reading programme, such as ‘Simultaneous Multisensory Teaching.’ The challenge arises when these learners are not identified early and their overall academic progress is affected due the curriculum becoming more demanding. Teachers are given work schedules to finish in a term, so the focus is more on covering the scheduled work. This increases demands upon them, particularly those working with learners who experience reading difficulties.

Teachers struggle to offer immediate support to some of the learners who are identified due to overcrowded classrooms, which also reduces individual attention as all learners stop working and the focus moves to the learner receiving support:

“Not easy in a classroom - in big classrooms” (LSE 1). *“The - the actual intervention is difficult because of the size of the classes and then there's ... thirty-minute periods”* (TC: FG1).

Overcrowded classrooms in South Africa are said to be one of the greatest disadvantages to learners with learning difficulties, including those with reading difficulties (Navsaria, 2011). Chuenyane (*City Press*, 2008-01-13) wrote of some 6,000 schools in Gauteng that has average class sizes of 45 learners, thus negatively affecting the teaching and learning process.

Another challenge is lack of continuity, when a previous teacher does not inform the current one of the support mechanisms used to support the learner. It becomes very difficult for the current teachers to implement the continuous support:

“So for you because you get the learners in Grade Seven, the last grade of the school, is there any communication with the previous teachers? Like from the beginning of the year to say to you, this learner already has got this kind of problems before maybe you can identify them? (Interviewer) “.... seldom. I would say seldom so because some years we used to have the blue books. So now - you know - it - it has disappeared along the way. So it's kind of difficult....” (TF: FG2)

Despite the use of records on documents such as learner profiles (‘blue books’, as referred to by TF) and GDE support forms (see Chapter One) to record the identified difficulties, support mechanisms used and the outcomes of support, SBST members indicated that there was limited or lack of communication. This affects the appropriate support (if any) that should be given to the learners, resulting in teachers not differentiating the reading matter:

“I feel the whole system is failing them and when it comes to support what - but once it - because the reading matter are not differentiated. They're not reading at the levels that they actually can read.” (LSE: 1).

4.5.2.3 Teaching and learning resources

According to the Ministry of Education in British Columbia, teaching and learning resources are texts, videos, software and other material that teachers use to assist learners to meet expectations for learning. During the second focus interview in School B, the SBST members raised the issue of limited teaching and learning resources that include ICTs as a challenge. They reported it as a challenge because it slowed down the teaching process. With regard to ICTs, they mentioned lack of teacher training as a contributory

factor towards effective use of ICTs as support mechanisms. The disadvantage of the use of visual ICTs such as television was raised, stressing the learners' passive viewing:

“It will need a whole change of mindset because as soon as you switch on the television the children go ... They go into a “close off my brain” mode. You know because they are so used to - to sitting there and not taking anything in. You know that passive viewing. So - um - it will have to be a paradigm shift in mindset”. (FG1).

The challenge with resources sometimes creates negative emotions as the teachers feel constrained and helpless:

“And those learners cannot read and cannot write. You know? That is painful also. You know some - uh - (crying) you - you know?”

What frustrates the teachers even more is when they try to support individual learners experiencing reading difficulties during a lesson. Other learners stop what they are supposed to do and listen to what is being said to the individual learner, thus becoming rude and passing negative comments to the learner. The limited or lack of resources, including ICTs, compounds the problem for the teachers:

“If there's a projector you find that it's only one. You understand? And I - a booking for Monday, finding that she also wants to use it so eventually hence the ICT thing in our schools, it's not - you know - as in - in theory. Ja. That's the problem because we don't have these facilities”. (T: FG2)

4.5.3 Supporting learners with reading difficulties

Supporting learners with reading difficulties, according to Bornman and Rose (2010: 19-26), is one of the practices that support inclusion (see section 1.13 of Chapter One). They further indicated that when learners are supported, taking into consideration and emphasising their individual strengths, the goal of functional participation is attainable. Learning support is also discussed by Landsberg (2007: 62), who refers the Education White Paper 6 (EWP6) and Bronfenbrenner's bio-ecological approach, in which the learner is supported in all levels of education, national, provincial and district. For the purpose of this study the support of learners is focused mainly at school level, inside and outside the classroom, which is on the micro level.

4.5.3.1 Support inside the classroom

Bornmann and Rose (2010: 55) advise that for teachers to provide proper support to the diverse learners' barriers inside the classroom they should set up an inclusive classroom, that is, one that encourages participation of all learners providing decision-making opportunities and suitable teaching strategies for all. Swart and Pettipher (2007: 3-4) draw on UNESCO's social and economic grounds in advising teachers to develop teaching practices that accommodate individual differences of all the learners. The teachers indicated the challenges they face when supporting learners inside the classroom. Asked: "*How do you deal with the needs of all learners experiencing reading difficulties in your classroom?*"(I:1), the response that was common from all interviews was individual attention, appearing 15 times on the matrix sheet:

"I then - I like to do individual - uh - programme with the learners. You know I will tell the learner, come and see me during break time or after school" (TF: FG2)
".....because some of the learners really need individual attention....." (LSE: 2).

Apart from individual attention, grouping of learners was also mentioned four times, with the participants indicating that they grouped the learners according to their abilities after they had identified the learners and their problems. A strategy to bridge the problem was developed, such as communication skills, word attack skills, context translation and understanding, listening skills, holding a pencil (foundation phase learners), syllabification skills, vocabulary enhancement, exposure to new words and the use of ICTSs (to move the focus from the teacher to the device). LSE 1 mentioned pair reading and group reading. In FG: 2 participants mentioned the multi-sensory approach in which a combination of perceptual modalities (visual and auditory) were used.

4.5.3.2 Support outside the classroom

Some of the learners experiencing reading difficulties present diverse other needs, such as emotional, behavioural and social problems:

"Home problems, social problems and so on. So the - the problems are many. So but for us to can identify them specifically it's I think it's not at our level. They need a specialist" (TD: FG2). *But they are referred to Teacher A or we refer - have*

them tested by professional people to see whether it's a language barrier or whether there is another problem.”TC: FG1).

The SBST forms networks with other service providers, such as health professionals, social workers and members of the South African Police Service for the referring of the learners. The abovementioned network of support in education is supported by Landsberg (2007: 64-65) and the DoE (2001: 10-11), which accepts that a high level of support can be flexible and can also take place outside the school. The participants indicated that they referred learners to the educational psychologists, social workers and remedial teachers on the school premises but in a different class. Confirming the above The DoE (2008: 15) indicate that a source of support can be located in the local community, citing government departments, non-profit organisations, early childhood and development services, and special schools.

Another challenge teachers are experiencing is the involvement of parents in giving consent so that the abovementioned specialists can provide support to the learners:

“We don't get - there's very little support from parents and a lot of these children, although they are there for NAS and remedial just don't come” (TB: FG1).

4.5.4 Support mechanisms

A support mechanism is a psychological term for something on which one depends to stay healthy and sane in day-to-day life (Kaufman, 2013: 2). The DoE (2002: 22) refers to it as a support strategy, and for the purpose of this study it refers specifically to reading difficulties, defined as strategies or interventions that help learners experiencing reading difficulties to cope with day-to-day teaching and learning activities.

4.5.4.1 The learner being part of the support mechanism

Two participants in the FG2 mentioned the involvement of the learner during the support process as one of the positive mechanisms. When asked to explain their learning support experience, they explained that the learner was encouraged to use his/her body as part of the support mechanism for reading difficulties:

“We opt to use is the multi-sensory approach teaching. There that approach it encourages learners to use all their senses. Ja. In applying their reading strategies.

This multi-sensory approach it also integrates all the three systems, the seeing and the hearing, the touching and the - and doing the movement” (TE: FG2).

The learner was guided in and allowed to use self-correction or receive assistance from other learners. They used their bodies to form letters of alphabet (kinaesthetic), use different colours of paper (visual):

“And in hearing, the auditory part, we encourage learners to look and say the word.”

According to the participants, when the learner was involved fully in the support mechanism the success rate became higher. Learners were also requested to compile their own dictionary in which they would write meanings of words that were new to them.

4.5.4.2 Teachers’ support

Teachers were offering support to the learners experiencing reading difficulties by differentiating the reading matter and making sure that it was at the correct reading level of the learners:

“Although the - the text wouldn't be exactly at their reading level, to adapt that and just to in - use it just to Tipex it out and replace it with a simpler sentence at their level, still in the will sort of revive their love of reading” (LSE 1).

Differentiated teaching is highlighted by Bornman and Rose (2010:73) as every learner is unique and learns differently. They argue that differentiated teaching provides learners with multiple options for receiving information and making sense of the ideas. Landsberg (2007: 76) also supports differentiation, focusing on curriculum content which should be contextualised for the learners to gain better understanding.

Other teachers mentioned the use of flash cards, pictures and picture books for learners said to be ‘visual learners’ (who learn by seeing):

“But even with those who have reading barriers we have to start with pictures then we introduce the letters gradually. The words and pic - so if the children read, see books there - um - picture books makes reading very easier for them” (LSE2).

Teacher E of focus group 1 mentioned ‘repetition’ as her best mechanism, using strips of papers, coloured papers and even newspapers. The other participants agreed that it was the best mechanism because it helped the learners to memorise and recall the correct pronunciation, at the same time helping with the correct spelling when the learners did written work. LSE 2 advised that reading can be made interesting by creating a reading corner in which learners can experience incidental reading. The reading corner was also helpful as learners could read in groups or in pairs. School A had a reading centre which was larger than a reading corner, and had a variety of material ranging from comic books, novels, picture books and ICTs. School B only has *Gauteng Online* laboratory which is seldom used.

Teacher F from school B reported that she used music as a support mechanism to enhance phonics and vocabulary. In section 2.6.3 of Chapter Two, music was noted as a support mechanism, with Horn (2009) stressing the benefits that learners experiencing reading difficulties receive from it, especially those with a poor phonological system in which sound sequences make up syllables. Several mechanisms were explored, including ICTs, as further discussed below.

4.5.4.3 ICTs as a support mechanism

In section 2.7 of Chapter Two, development of ICTs and educational software was discussed, and it was evident from Schunk (2004) that views of the theorists Skinner, Piaget, Vygotsky and Gestalt played a role. The researcher considered the constructivist view for this study as influenced by Vygotsky’s sociocultural theory and the relationship between ICTs and literacy. Global, national and local perspectives on the use of ICTs in addressing reading difficulties were explored from Dettori and Persico (2011), Plom et al (2009), Comber, Brunson and Green, (2008) and Leask and Pachler (2005), whose findings pointed out that ICTs formed part of a rapid evolution towards a global, knowledge-orientated economy and information society. On the other hand, findings from scholars such as Westwood (2011) and Wilson (2007) pointed to the limited use of other ICTs as compared to the computers alluded to by SBSTs during the focus group interviews.

The abovementioned concern was evident in the matrix and transcripts, with computers viewed as the most used ICTs, followed by radio and tape recorder. On the matrix the computer was mentioned 11 times, with all participants mentioning its use:

“I have a computer in my classroom with basic programmes but I can only - it's only one and it's on an individual basis so when I do remedial I will let one child sit for a few minutes doing compound words or whatever it is on - on a programme in the classroom” (TA:FG 2).

LSE 1 referred to the use of computers together with the Internet, as she used the information from the websites mainly to capacitate the teachers in supporting the learners experiencing reading difficulties:

“I use Internet-based learning a lot. I use websites and I observe learners in a play - in a situation where they play, with games. Reading games - um - spelling games, okay we're not talking about spelling; we're only talking about reading. I've got excellent websites on their level but contextual (LSE 1).”

Ndlovu and Lawrence (2012:5) found that teachers in most South African public schools have attended ICT training and generally these sessions constitute basic computer skills. That might make a contribution towards computers being the most used ICTs in schools. During the observations in school A the researcher witnessed the maximum use of computers, communicative white board, *Microsoft* reading programmes, the Internet, e-beam and a special pen to support learners experiencing reading difficulties:

“I use mainly Microsoft, this - this pen. They click on it and they drag it so it's an interactive tool.”

The teacher from school A who was observed was asked how she determined the kind or level of support to provide to the identified learners, and indicated that she also conducted a needs analysis to provide relevant support to the learners:

“Ja.. No I identify them. I use ... spelling test at the beginning of the year. You get it on the internet as well as Bird's Reading Test to - us - get their reading and spelling ages.”

Participants during the two focus group interviews mentioned that they made use of radio and tape recorders:

“... tape recorders you - we sometimes use them for the rhymes” (TE: FG1).

For audio-visual activities they indicated the use of television, though some of the participants discouraged this, indicating that it sometimes made the learners passive participants:

“...even if when maybe you use TV so that they watch something there, they just watch for the sake of watching” (...FG2).

The other ICT which only one school (school A), indicated or make use of, is the use of the interactive whiteboard with e-beam. The e-beam is used as a projector to project the information on the interactive whiteboard. Learners were able see the words, pictures and the sounds of those words. They got a chance to write on the interactive whiteboard as well. When they write the word on the interactive whiteboard there is a voice that pronounces the word, in that way learners are able to rectify their mistakes.

The reviewed literature in Chapter Two revealed significant evidence regarding the use of ICTs in the classroom that improved the process and nature of learning. The findings from the literature, interviews and observation indicated that learners with reading difficulties could gain much from using ICTs, such as text-to-speech, communicative whiteboard, tape recorders, radio, computers and reading software.

4.6 CONCLUSION

This chapter has presented the findings from the focus groups interviews, individual interviews and observations. The focus was on the issues of inclusive education that included factors affecting learners experiencing reading difficulties, early identification of learners and support mechanisms, and learner support considered suitable for learners experiencing reading difficulties.

The next chapter (chapter 5) and final chapter of this study present conclusions from the above-presented findings, and make recommendations thereof. Recommendations includes for future research and limitations of the study.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous four chapters of this study, ICTs as a support mechanism for learners experiencing reading difficulties have been explored. The literature reviewed in Chapter 2 included the current state of reading difficulties in primary schools, support mechanisms used to support the learners and the role of inclusive education in addressing reading difficulties. Chapter 3 described the research methodology and 4 presented the findings. Throughout Chapters 1 to 4, the focus was on the aim of the study as indicated in Chapter 1, namely, to explore, explain and describe the use of ICTs to support intermediate phase learners who experience reading difficulties in two public ordinary primary schools. School A and School B. A summary of the findings were presented in Chapter 4, where the aim of this study was aligned with the answering of the research questions. Having been informed by the literature review as background information, the findings from interviews and observations were discussed according to themes identified from the data analysis. This section provides a brief summary of the findings according to the themes, and recommendations are made.

In order for the researcher to understand the support of the learners experiencing reading difficulties, literature on the current role of inclusive education, support mechanisms used by various teachers and ICTs as a support mechanism was reviewed. The information served to substantiate the findings in this study where appropriate. Different reading approaches and support mechanisms used to address reading difficulties were described with particular reference to an inclusive education setting.

The discussion on inclusive education was aimed at emphasising support mechanisms and their relevance in addressing reading difficulties. (2.6). ICT as a support mechanism was described in relation to the theoretical framework which influenced this study, namely, Vygotsky's sociocultural theory. A summary of the findings is presented below, according to the four themes identified from the data analysis: needs analysis, factors affecting learners experiencing reading difficulties, supporting learners with reading difficulties, and support mechanisms.

5.2 SUMMARY OF FINDINGS ACCORDING TO THE EMERGED THEMES

In answering the first interview question: *How do you deal with the needs of all learners experiencing reading difficulties in your classroom?* the participants' responses gave rise to the theme of needs analysis.

5.2.1 Needs analysis

Participants indicated that for learners to receive the support they needed it was first necessary to determine their level of reading difficulty. Different strategies, including assessment methods, were mentioned as tools and ways to conduct the needs analysis (4.1.1). Despite identifying the levels of reading difficulties of the learners there are factors affecting all learners experiencing reading difficulties, as discussed in the next section.

5.2.2 Factors affecting learners experiencing reading difficulties

During the focus group interviews, participants indicated factors affecting learners experiencing reading difficulties which coincided with some of the possible causes as substantiated by the literature reviewed, for example, language (4.5.1). Reading difficulties experienced as a result of LOLT, which is mostly different in the foundation phase, also emerged from this theme as a factor. Participants indicated LOLT in the foundation phase as mostly learners' mother tongue, and when they reached intermediate phase the LOLT changed to English. Learners experience difficulties in identifying most of the English words which result in reading difficulties (4.4.1.1).

Another factor that emerged during analysis of data, also substantiated by the literature review, was early identification. The discussion of inclusive education indicated that early identification of learners experiencing reading difficulties is one of the most important approaches that may lead to a full range of support (4.4.1). The DoE (2008) and Rhodeniser (2012) support early identification of learners experiencing reading difficulties because they view it as a preventative measure and process that can lead to timely support.

Other factors identified were overcrowded classrooms and limited or lack of teaching and learning resources, including ICTs (4.1.2.2 and 4.1.2.3).

5.2.3 Supporting learners with reading difficulties

The support was outlined in terms of two areas, in and outside the classroom. Inside, setting up an inclusive classroom (4.1.4) was mentioned as a prerequisite. Participants spoke of strategies such as individual attention and group work that they used inside the classroom to support learners experiencing reading difficulties. Participants also mentioned the use of ICTs when introducing learners to new words.

The support outside the classroom, according to the participants, means addressing emotional and behavioural problems of the learners which manifest as a result of reading difficulties or vice versa. Learners were said to be referred to outside services of Social Development and Health (4.1.4.2).

The last three interview questions asked were:

- What is your understanding of a support mechanism for learners with reading difficulties?
- How do you use ICTs in your teaching and learning activities?
- How do you see yourself using ICTs to support learners experience reading difficulties?

The responses to these questions led to the following themes, namely support mechanisms, in particular ICTs as a support mechanism, in and outside the classroom.

5.2.4 Support mechanisms

The theme of ‘support mechanisms’ was analysed under two sub-themes, that is the teacher and the learner as part of the support mechanism (4.5.4) and ICTs, also featured in the data collected in the responses, especially when the teacher as a support mechanism was discussed. The observation of the practical support merged the theory that was described in the literature review about ICTs as a support mechanism for learners experiencing reading difficulties. The findings presented significant evidence that integration of ICTs into classroom improves the process and nature of learning, even though there was less comprehensive evidence of ICTs directly linked to improving learning outcomes.

The support outside the classroom indicated a lack of parental support, especially when learners were referred to other service providers, such as health professionals (4.1.3.2). Inclusive education was also discussed briefly to indicate how the overarching framework of inclusive education supports or does not support mechanisms used to address reading difficulties. The aforementioned summaries of the collected data enabled the researcher to arrive at the conclusions which follow in the next section.

5.3 CONCLUSIONS

The following conclusions were drawn from the participants' responses and observations which were supported by the literature review as indicated above:

- Teachers use strategies, inter alia, as spelling tests and comprehension tests to identify the level of reading difficulties of learners.
- Most learners experiencing reading difficulties are not identified as early as required by the SIAS document (2.6).
- The LOLT (African languages), which is used in the foundation phase, has an effect on reading abilities of learners when they enter the intermediate phase in which the LOLT is English.
- There is a lack of or limited resources to support learners experiencing reading difficulties and other barriers.
- There is limited use of ICTs as a support mechanism for learners experiencing reading difficulties, despite being excellent tools that caters for learners' different learning styles. Most of the support mechanisms described in 2.6.3 do not cater for a variety of learning styles as outlined here. Based on the evidence of limited use of ICTs in the classroom, as observed by the researcher and mentioned by the participants in Chapter Four, brought the researcher to the conclusion that teachers' capacity with regard to the use of ICTs is limited. Participants' responses are evident in Addendum 4.5.
- Overcrowded classrooms make it a challenge for teachers to provide adequate support to learners experiencing reading difficulties.

- There are no guidelines provided for teachers on how to support the learners who experience reading difficulties. This results in teachers using whatever mechanisms or resources they have at their disposal. LSE 1 said that she used current material to create reading interest of learners, for example, the use of puppets and masks.
- ICTs assist in enhancement of vocabulary development, as mentioned by teachers who managed to use it (4.5.3.4).
- Training of teachers with regard to ICTs is limited to the basic use of computers and the training is not taking place as set out in these guidelines.
- There is a lack of or limited parental support, especially when support outside the classroom is required

5.4 RECOMMENDATIONS

The aforementioned conclusions led the researcher to make the following recommendations, which are guided by the data collected from the interviews and observations as the selected data collection methods for this study in Chapters 1 and 3. The collected data was also substantiated by the literature review in Chapter 2.

5.4.1 Recommendations to the Department of Education

- The DoE should put in place uniform strategies that form part of inclusive education to be used by teachers to identify the level of reading difficulties of the learners.
- There should be a language bridging class that forms a transition for learners who used African languages as the LOLT at foundation phase before they enter intermediate phase where the LOTL is English.
- ICT Teacher training, which is provided as part of teacher development by the e-Learning Unit of the DoE, should not only be limited to basic computer skills but also include a variety of ICTs and integration with daily teaching and learning activities.

- This training should follow the *Guidelines for Teacher Training and Professional Development* in ICTs as set out in the White Paper on e-Education (1.13), which recommends that teacher training should be implemented at developmental levels. The levels are illustrated in the figure 5.1. below.

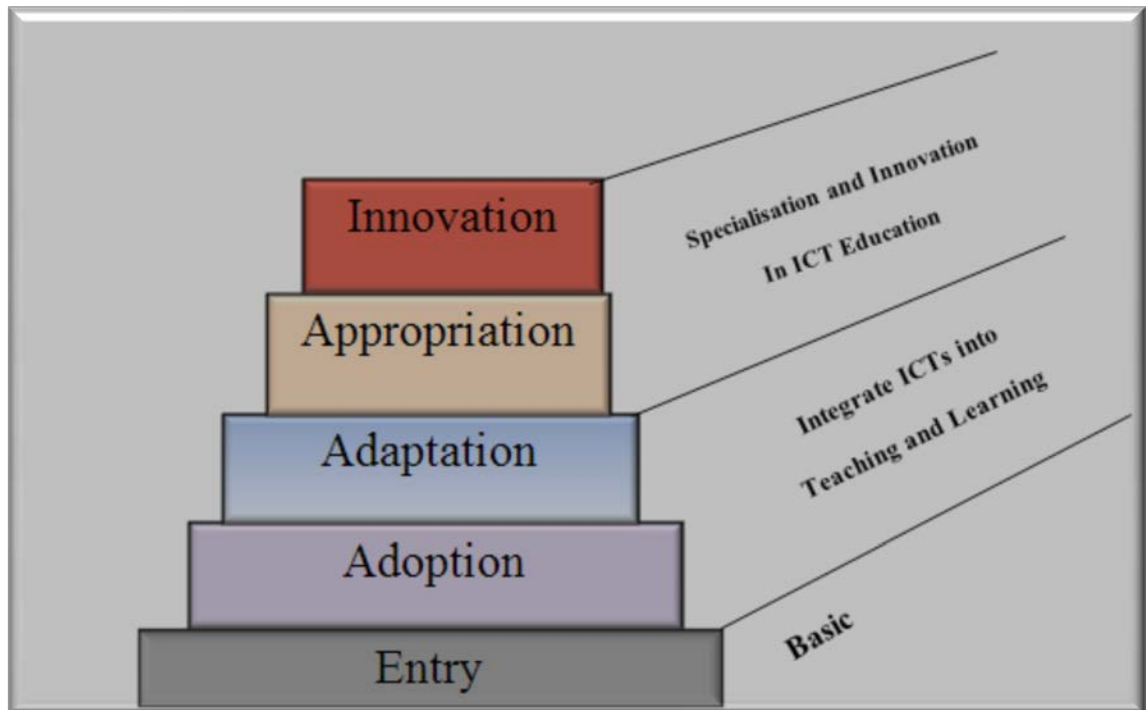


Figure 5.1: ICTs training levels

The above illustrated levels as outlined by the DoE (2007: 7) can be applied to the training of ICTs as follows:

- Entry level

The teacher enters this level of training being able to use some of the ICTs but they are likely to lack confidence and share their skills with others. As a result, at this level, they are trained to teach learners on how to use the ICTs.

- Adoption level

This level requires the teacher to use various ICTs and be able to teach learners how to use ICTs. He/she will learn how to integrate the ICTs with everyday classroom activities.

- Adaptation level

The teacher at this level is able to use ICTs to support everyday classroom activities. The teacher will learn creative ways of using ICTs independently and identify ways of supporting learners experiencing learning difficulties.

- Appropriation level

At this level the teacher has a holistic understanding of the ways in which ICTs contribute towards teaching and learning. He/she has experience and confidence to reflect on how ICTs can influence teaching and learning strategies.

- Innovation level

The teacher is able to develop an entirely new learning environment that uses ICTs as a flexible tool, so that learning becomes collaborative and interactive.

5.4.2 Recommendations to the teachers

The following guidelines are recommended for the teachers to use ICTs on a daily basis in the classroom to support learners experiencing reading difficulties. Teachers' support should follow these guidelines, simultaneously adhering to the SIAS document and identifying learning barriers, thus preventing reading difficulties or, where necessary, giving the necessary support on time:

1. Start with simple activities that may form part of functional practice, as described by Bialobrzeska and Cohen (2005: 32), who refer to it as the 'first level' and one on which learners use ICTs in basic functional ways. The researcher found this level suitable in supporting learners with reading difficulties in that they use ICTs in a reading task that they would previously have done in another way, for example, a short story on a *PowerPoint* presentation with pictures for learners to read and associate some words with the given pictures.
2. Make combinations which are integrative practice (Bialobrzeska & Cohen, 2005: 33). From this step the researcher recommends that the teacher should integrate the purpose of the lesson activity with the functions of ICTs, for example working with a comprehension passage using *Microsoft Word*. Learners might answer questions by bolding, underlining or changing the font size of the correct answers from the passage.

Making combinations can also be part of transformational practice in which learners can organise reading activities in pairs or groups.

3. Focus on the learning content, not ICTs' techniques. Emans (2012: 4) suggests that the teacher make sure that the use of ICTs serves as a learning and support goal. The researcher concurs with him and recommends that ICTs should be used to improve the reading levels and different learning styles of the learners. These can be achieved in the following ways:

- making sure that learners use ICTs as visual aids when they see the words on computer screens or communicative whiteboards
- ICTs can be used as auditory aids as learners listening to the words on the tape recorder or computer using the speakers
- At the same time learners can do the above while operating the ICTs by clicking, typing and switching the devices on and off.

4. Changing role. The roles of the teacher, when using ICTs as a support mechanism, change, from one of teacher to one of mentor, coach, guide and motivator (Emans 2012: 4). The researcher concurs with Emans that the use of ICTs allow learners to interact actively with their learning material. For example, to learn from the computer they have to click and type. Other ICTs, such as tape recorders and electronic devices, have to be switched on and off, buttons need to be pressed if they want to move forward, rewind or pause audio material. The teacher needs to be present to coach, guide and motivate when learners are not getting it right.

The aforementioned guidelines are summarised in the following table:

Table 5.1: Summary of the guidelines

Guideline	ICT tool/program/approach	Learning Support Activity
Functional practice	<i>PowerPoint</i>	Reading and associating with pictures
Integrative practice	<i>Microsoft Word</i> functions	Bolding, underlining, or changing font size for the answers of the comprehension passage

Focusing on learning content	computer screens communicative whiteboards tape recorder	Viewing words on the screen Listening to words on the ICT audio device such as tape recorder Typing words/sentences
Changing role of the teacher	Learner-centred approaches	Mentoring, facilitation and coaching

5.4.3 Recommendations for future research

This study has called to mind some interesting future prospects. The outcomes revealed significant evidence that integration of ICTs into classrooms changes the process and nature of learning positively (2.7). In order to create a more accurate overall view of the use of ICTs as a support mechanism, the research should be continued and the data collection methods broadened. Other data collection instruments, for example learner's progress reports and profiles, should also be used, and statistics of learners experiencing reading difficulties. The development of methods to investigate long-term outcomes of ICTs support, including appropriate comparison groups, is required. More research on the effectiveness of the use ICTs as a support mechanism is needed in the foundation phase because it is the initial phase of learning, which is where early identification and intervention should take place.

5.5 LIMITATIONS OF THE STUDY

The researcher acknowledges that the main aim of the study was reached but is aware of some limitations. Firstly, the study was conducted in two public primary schools which lasted for four weeks. There was a time constraint to observe the effectiveness of some of the support mechanisms used and mentioned. It would be better if it were carried out over a period of a term in which learners could receive assessment results at the end of the term. Only SBST members were included as learners with barriers to learning are referred to them for support, thus learners and parents' voices were excluded, despite forming part of the conclusions from the collected data. Class teachers who identify these learners should also be involved in the research.

5.6 CONCLUSION

This chapter is the final one in a report on a study designed to answer the question “*What significance can the use of ICT’s have as a support mechanism for learners experiencing reading difficulties in the intermediate phase?*”, based on information gleaned from the literature review in combination with data collection and analysis as posited above.

In conclusion, the use of ICTs has significance in breaking down the barriers to learning when it is used as a support mechanism for learners experiencing reading difficulties. This means that learners’ different learning styles are catered for when using ICTs as a support mechanism, and as a result every learner experiencing reading difficulties can receive and benefit by the relevant support. The main aim of this study was realised by providing guidelines that teachers are able to follow when using ICTs as a support mechanism for learners experiencing reading difficulties.

6. BIBLIOGRAPHY

- Anderson, N. 2009. *Equity and information communication technology (ICT) in Education*. New York: Peter Lang.
- Ashton-Townsend, J. 2007. Reading - How the Aspects of Language Are Related to Reading. Available at <http://EzineArticles.com/?expert=Julie> Ashton-Townsend. Accessed 17/04/2012.
- Attneave, F. 2004. Perception and related areas. In Koch (ed). *Psychology: A study of a Science*. McGraw: Hill.
- Babbie, E. 2010. *The Practice of Social Research: International Edition*. 12th Ed. USA: Wadsworth.
- Babbie, E. & Mouton, J. 2003. *The Practice of Social Research*. Cape Town: Oxford University Press.
- Babbie, E. & Mouton, J. 2001. *The Practice of Social Research*. Cape Town: Oxford University Press.
- Bender, W.N. 2004. *Learning Difficulties*. New York: Pearson Education.Inc.
- Bender, W.N. & LARKIN, M.J. 2003. *Reading Strategies for elementary students with learning difficulties*. New York: Pearson Education. Inc
- Bialobrzeska, M., & Cohen, S. 2005. *Managing ICTs in South African Schools: A guide for Principal*. Braamfontein: SAIDE.
- Birkets, S. 1995. *The Gutenberg Elegies: The fate of reading in an Electronic Age*. New York: Fawcett Columbine.
- Blackmore, J., Hardcastle, L., Bamblett, E., & Owens, J. 2003. *Effective use of Information and Communication Technology (ICT) to Enhance Learning for Disadvantaged School Students*. Australia: Department of Education, Science and Training.
- Bless, C & Higson-Smith, C. 2000. *Social Research Methods: An African Perspective*. 3rd Ed. Zambia: Juta Education (Pty) Ltd.

- Bohman-Kalaja, K. 2007. *Reading Games: An Aesthetic of play in Flann Obien, Samuel Beckett & George Perec*. USA: Dalkey.
- Bond, L.G. Tinker, M.A. Wasson B.B. and Wasson J.B. 1989. *Reading Difficulties: Their Diagnosis and Correction*. United States of America: Prentice Hall.
- Bornman, J. & Rose, J. (2010) *Believe that all can achieve: Increasing classroom participation in learners with special support needs*. Pretoria: Van Schaick.
- Bouwer, C. 2007. Identification and Assessment of Barriers to Learning. In. Landsberg, E., Kruger, D. & Nel, M. (Eds.), *Addressing Barriers to Learning: A South African Perspective*. Pretoria: Van Schaik.
- Bruning, R.H., Schraw, G. J., Norby, M.M. & Ronning, R.R. 2004. *Cognitive Psychology and Instruction*. New Jersey: Pearson.
- Bursuck, W.D. 2011. *Reading Instruction for Students who are at risk or have difficulties: a multi-tier approach*. (2nd ed). Upper Saddle River, NJ: Pearson.
- Bursuck, W.D. & Damer, M. 2007. *Reading Instruction for Students who are at risk or have difficulties*. United States of America: Pearson Education.Inc.
- Byrne, B., Fielding-Barnsley, R. & Ashley. 2000. Effects of preschool phoneme identity after six years: outcome level distinguished from rate of response. *Journal of Educational Psychology*, 92, 659-67.
- Cain, K. 2010. *Reading Development and Difficulties*. United Kingdom: John Wiley & Sons Ltd.
- Cain, K & Oakhill, J. 2007. *Reading comprehension difficulties*. United Kingdom: John Wiley & Sons Ltd.
- Chapman, H.J. 2010. *Factors affecting reading outcomes across time in bureau of indian education reading first schools*. Logan: Utah State University. USA: Pearson Education.
- Champman, J.W. & Tunmer, W.E. 2003. Reading difficulties, reading-related self-perceptions, and strategies for overcoming negative self-beliefs. *Reading and Writing Quaterly: Overcoming Learning Difficulties*, v19 n1 p5-24 Jan-Mar 2003.

Chigona, A., Chigona, W., Kanyonyo, P & Kausa M. 2010. An empirical survey on domestication of ICT in schools in disadvantaged communities in South Africa. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 2010, Vol. 6, pp. 21-32.

Chuenyane (City Press, 2008-01-13).

Cohen, L. & Manion, 2002. *Research Methods in Education*. London: Croom Helm.

Comber, A.J., Brunson, C. & Green, E. 2008. Using a GIS-based network analysis to determine urban greenspace accessibility for different ethnic and religious groups. *Land and Urban Planning*, 86: 103-114.

Cooney, K. & Ha, I. 2005. Internet-based literacy development for middle school students with reading difficulties. *Literacy Learning: The Middle Years* 13, (1): 36-44.

Creff, M. 2011. Information collection: interviewing. In. Devos, A.S., Strydom, H., Fouché, C.B. & Delport. C.S.L.(Eds) 2011. *Research at Grass Roots: For the Social sciences and Human Service Professions*. (4th Ed). Pretoria: van Schaik.

Creswell, J.W. 2012. *Educational research: planning, conducting, and evaluating qualitative and quantitative research*. Boston: Sage.

Creswell, J.W. 2009. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (3rd ed.). United States of America: Sage.

Creswell, J.W. 2007. *Qualitative inquiry and research designs: choosing among five traditions* (2nd ed.). Thousand Oaks: Sage

Creswell, J. W. & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice*, 39(3), 124-131

Denzin, N.K & Lincoln, Y.S. (eds). 2003. *Collecting and interpreting Qualitative materials*. London: Sage.

Dednam, A. 2007. First Language Problems. In. Landsberg, E., Kruger, D. & Nel, M. (Eds.), *Addressing Barriers to Learning: A South African Perspective*. Pretoria: Van Schaik.

Dettorig, G. & Perssico, D. 2011. *Fostering Self-Regulated Learning through ICT*. United States of America: Information Science Reference.

Department of Education: (2008). *National Curriculum Statement*. Pretoria: Department of Education.

Department of Education: (2008). *National Reading Strategy*. Pretoria: Government Printers.

Department of Education, 2008. *National Strategy on Screening, Identification, Assessment and Support: School Pack*. Pretoria: Department of Education.

Department of Education, 2007. *Guidelines for Teacher Training and Professional Development in ICT*. Pretoria: Department of Education.

Department of Education: (2005). *Conceptual and Operational Guidelines for the implementation Inclusive education: Full service schools*. Pretoria: Government Printers.

Department of Education: (2004). *White paper 7: e-education*. Pretoria: Government Printers.

Department of Education. (2003). *White Paper on e-Education. Transforming Learning and Teaching through Information and Communication Technologies*. Pretoria: Department of Education.

Department of Education, 2002. *Draft guidelines for the implementation of inclusive education (second draft)*. Pretoria: Department of Education.

Department of Education: (2001). *White paper 6: Special needs education: Building an inclusive education and training system*. Pretoria: Government Printers.

De Vos, A.S., Strydom, H., Fouche, C.B. & Delpont, C.S.L. 2005. *Research at Grass roots*. Pretoria: Van Schaick.

Donald, D., Lazarus, S & Lolwana, P. 2002. *Educational Psychology in social context*. (2nd Ed). Cape Town: Oxford University Press.

- Durrheim, K. 2010. Research design. In Terra Blanch, M., Durreheim, K., & Painter, D. (Eds) 2010. *Research in Practice: Applied Methods for the Social sciences*. South Africa: University of Cape Town Press.
- Du Toit, D. 2006. *Ethics issues in qualitative research*. Retrieved August 26, 2009, from www.sahealthinfo.org/ethics/book1.
- Dyer, C. 2006. *Research in Psychology: A Practical Guide to Methods and Statistics*. Australia: Blackwell Publishing.
- Easton, P. 2007. *Literacy is the key to addressing Africa's woe*. Tallahassee: Florida State University.
- Elston, C. 2007. *Using ICT in the Primary School*. London: Sage.
- Emans, E. 2012. *Guidelines for primary school teachers for integration of ICT in their lessons*. Amsterdam: University of Amsterdam.
- Engeström, 2005. Non scolae sed vitae discimus: Towards overcoming the encapsulation of school learning. In Daniels, H. (ed) 2005. *An Introduction to Vygotsky*. New York: Routledge.
- Engelbrecht, L., Engelbrecht, P., Green, L., & Naicker, S. 2001. *Inclusive education in action*. South Africa: Van Schaick.
- Farrell, G. and Shafika, I. 2007. *Survey of ICT and Education in Africa: A Summary Report, Based on 53 Country Surveys*. Washington, DC: infoDev / World Bank. Available at <http://www.infodev.org/en/Publication.353.html>. Accessed 01/05/2010
- Fleetham, M. 2007. *Multiple Intelligence*. New York: Network Continuum Education.
- Fletcher, M & Vaughn, S. 2009. Response to Intervention: Preventing and Remediating Academic Difficulties. *Child Development Perspective* Volume 3, Issue 1, pages 30-37, April 2009.
- Florian, L. & Hegarty, J. 2004. *ICT and Special Educational Needs: A tool for Inclusion*. London: Open University Press.

Fontenot, R. 2010. *Developing Prerequisite for Reading: A search for a Rationale*. Malaysia: Universiti Utara.

Fouché, C.B & Delpont, C.S.L. 2011. Introduction to the research process. In de Vos, A.S., Strydom, H., Fouché, C,B & Delpont, C.S.L. 2011. *Research at Grass Roots*. (4th Ed). Pretoria: Van Schaick.

Fouché, C.B & Delpont, C.S.L. 2009. Introduction to the research process. In de Vos, A.S., Strydom, H., Fouché, C,B & Delpont, C.S.L. 2011. *Research at Grass Roots*. (6th Impression). Pretoria: Van Schaick.

Fouché, C.B & Schurink, W. 2011. Qualitative research designs. In de Vos, A.S., Strydom, H., Fouché, C,B & Delpont, C.S.L. 2011. *Research at Grass Roots*. (6th Impression). Pretoria: Van Schaick.

Friend, M & Bursuck, W.D. 2006. *Including Students with special needs: A practical guide for classroom teachers*. Fourth Edition. Boston: Pearson Education Company.

Fuchs, D., Mock, D., Morgan, P & Young, C. Responsiveness to intervention: Definitions, evidence, and implications for the learning disabilities construct. *Learning Disabilities Research and Practice* 2003; 18: 157-171.

Gamble, N. 2000. New Literacies, New Technologies. In Gamble, N. & Eastwood, N. 2002. *ICT and Literacy: Information and communication technology, media, reading and writing*. New York: Continuum.

Gay, L.R., & Airasian, P. 2000. *Educational Research: Competencies for analysis and application*. Sixth Edition. New Jersey: Merrill.

Gibson, L. 2009. *The Effects of Computer Assisted Reading Program on the Oral Reading Fluency and Comprehension of At-Risk, Urban First Grade Students*. Ohio: Ohio State University.

Gillet, J.W., Temple, C. & Crawford, A.N. 2004. *Understanding Reading Problems: Assessment and Instruction*. United States of America: Pearson.

Glascoc, F.D. 2006. *Evaluation of children with Reading Difficulties*. 15,74(12): 2079-2086.

Glenn, D. 2009. Matching Teaching Style to Learning Style May not Help Students. *Chronicle of Higher Education* 56.17 (2010): A1-A8. Academic Search premier. EBSCO. Web 15 Dec 2009. Chronicle of Higher Education website.

Goodman, K. 1986. What's whole in whole language? Richmond Hill Ontario: Scholastic-Tab.

Graceffo, A. 2009. Listening Vs. Reading - Which skill is more important for language learning.

Graves, M.F. 2000. A Vocabulary Program to Complement and Bolster a Middle-grade Comprehension Program. In Taylor, B.M., Graves, M.E. & Van den Broek (Eds.), *Reading for Meaning: Fostering Comprehension in the Middle grades*. New York: Teachers College Press.

Gravetter, F.H. & Forzano, L.B. 2003. *Research methods for the behavioral sciences*. Belmont: Wadsworth.

Gresham, F., Restori, A & Cook, C. To test or not to test: Issues pertaining to response to intervention and cognitive testing. *Communique* 2008; 37: 5-7.

Groenewalt, T: 2004. A Phenomenological research design illustrated. *International Journal of Qualitative Methods*, 3(1). Article 4. Retrieved June 17, 2010, from http://www.ualberta.ac/~iiqm/backissues/3_1/pdf/groenewald.pdf. Accessed: 21/08/2010.

Gunning, T.G. 2010. *Assessing and correcting Reading and Writing Difficulties*. United States of America: Pearson Education.

Henning, E. with Wilhelm Van Rensburg and Bridget Smith. 2004. *Finding your way in Qualitative Research*. Pretoria: Van Schaick

Higgs, P & Smith, J. 2006. 2nd Edition. *Rethinking the Truth*. Cape Town: Juta.

Hook, P & Jones, S. 2004. The importance of automaticity and fluency for efficient reading comprehension. *Perspectives: International Dyslexia Association*. 24 (20), 16-24.

Horn, C.A. 2009. *Music as an intervention strategy to address reading difficulties of Grade 2 learners*. Pretoria: University of South Africa

Howie, S.J., (2007). Reading Literacy in South African schools. PIRLS 2006 Encyclopedia: *A guide to reading education in the forty PIRLS 2006 countries*. Boston.

Howie, S. (2006). Multi-level factors affecting the performance of South African secondary school pupils in mathematics. In Howie, S., & Plomp, T. (Eds).(2006). *Contexts of Learning Mathematics and Science: Lessons learned from TIMSS*. London: RoutledgeFalmer

Howie,S. (2007) *South Africa faces literacy crisis*, [Online], Available: <http://web.up.za/default.asp?ipkCategoryID=2843&articleID=136>. Accessed 21/08/2010.

Howie, S., van Staden, S., Tshele, M., Dowse, C & Zimmerman, L. 2012. *Progress in International Reading Literacy Study 2011: South African Children's Reading Literacy Achievement*. Pretoria: University of Pretoria.

Ivankova, n., Creswell,j.w., & Clark, v.l. 2011. Foundations and approaches to mixed methods research. In Marie, K.(Ed) 2011. *First Steps in research*. Pretoria:Van Schaick.

Jefferson, T. 2007. *Literacy: Bulding Literacy Knowledge for Education Professionals*. Washington DC: EMSTAC.

Jenkins, J., Fuchs, L., Vand den Broek, P., Epsin, C & Deno, S. 2003. Accuracy and Fluency in List & Context Reading of Skilled and RD groups: Absolute & Relative Performance Levels. *Learning Disabilities Research and Practice*. 18 (4), 237-245.

Jennings, J.H., Caldwell, J. & Lerner, J.W. 2006. *Reading problems assessment and teaching strategies*. (5th ed). Boston: Pearson Education.

Joppe, M. (2000). *The Research Process*. Retrieved April/07 2011, from <http://www.ryerson.ca/~mjoppe/rp.htm>.

Kandel, E.R. 2007. *In search of Memory. The emergence of a newscience of a New Science of Mind*. Columbia: Oliver Sack.

Kaniki, 2010. Doing an information search. In Terre Blanche, M., Kelly, K., Durrheim, K & Painter, D. 2010. *Research in Practice*. Cape Town: University of Cape Town Press.

- Kaufman, A.S. 2013. APA handbook of testing and assessment in Psychology/Kurt F.G., editor in-chief; Bruce A.B...[et al.], associate editors. Washington, DC: American Psychological Association.
- Kazdin, A.E. 2004. Evidence-based treatments: Challenges and priorities for practice and research. *Child & Adolescent Psychiatric Clinics of North America*, 13(4), 923.
- Kelly, K. 2010. From encounter to text: collecting data in qualitative research. In Terre Blanche, M., Kelly, K., Durrheim, K & Painter, D. 2010. *Research in Practice*. Cape Town: University of Cape Town Press.
- Kozulin, A. 2005. The concept of activity in Soviet psychology: Vygotsky, his disciples and critics. In Daniels, H. (ed) 2005. *An Introduction to Vygotsky*. New York: Routledge.
- Kozulin, A. 2003. Psychological tools and mediation. In Kozulin, A., Gindis, B., Ageyev, V.S. & Miller, S.M. 2003. *Vygotsky educational theory in cultural context* (eds). UK: Cambridge University Press.
- Kruger, D & Yorke, C. Collaborative co-teaching of Numeracy and Literacy as a key to inclusion in an independent school. *S. Afr. j. educ.* [online]. 2010, vol.30, n.2, pp. 293-306. ISSN 0256-0100. Accessed: 22 Dec 2011.
- Landsberg, E. 2007. Learning Support. In. Landsberg, E., Kruger, D. & Nel, M. (Eds.), *Addressing Barriers to Learning: A South African Perspective*. Pretoria: Van Schaik.
- Lapp, D., Flood, J., Brock, C. & Fisher, D. 2007. *Teaching reading to every child*. Fourth Edition. London: Lawrence Erlbaum Associates.
- Leask, M. & Pachler, N. 2005. *Learning to Teach Using ICT in the Secondary School: A Companion to School Experience*. New York: Routledge.
- Lerner, J. & Kline, F. 2006. *Learning Disabilities and Related Disorders: Characteristics and Teaching Strategies*. New York: Houghton Mifflin Company.
- Lindegger, G. 2010. Research methods in clinical research. In. Terra Blanch, M., Durreheim, K., & Painter, D. (Eds) 2010. *Research in Practice: Applied Methods for the Social sciences*. South Africa: University of Cape Town Press.

- Little, S., Akin-Little, A., & Richards, T. (2006). Learning Disorders. In J. Fisher, & W. O'Donohue, *Practitioner's Guide to Evidence-Based Psychotherapy* (pp. 368-376). US: Springer.
- Lou, Y., Abrami, P.C. & d'Apollonia, S. 2001. Small group and individual learning with technology: A meta-analysis. *Review of Educational Research*, 71(3), 449-529.
- Lundahl, A.A. 2012. *Early identification of reading difficulties experienced by Spanish-speaking English language learners*. Madison: University of Wisconsin.
- Lyon, R. 2003. *Children of the code*. UK: NICHD.
- Maritz, J. & Visagie, R. 2010. *Methodological Rigour and Ethics of Accountability within a Qualitative framework*. Pretoria: UNISA.
- McBurney, D.H. 2001. *Research Methods*. Belmont: Wadsworth
- McGill-Franzen, A. & Allington, R.L. 2011. *A Handbook of Reading Disability Research*. New York: Routledge.
- McMillan, J.H., & Schumacher, S. 2006. *Research in Education: evidence-Based Inquiry*. New York: Pearson.
- Mercer, C.D. & Mercer A.R. 2005. *Teaching students with learning problems*. Columbus, OH: Pearson.
- Meyer, M. 2002. Repeated reading: An old standard is revisited and renovated. *Perspectives: International Dyslexia Association*. 28 (1), 15-18.
- Mikulecky, B. 2008. *Teaching Reading in a Second Language*. USA: Pearson
- Moats, L. & Tolman, C. 2009. Excerpted from *Language Essentials for Teachers of Reading and Spelling (LETRS): The challenge of Learning to Read (Module 1)*. Boston: Sopris West.
- Motallebzadeh, K. & Ganjali, R. Sept 2011. 'SMS: Tools for L2 Vocabulary. Retention and Reading Comprehension Ability', *Journal of Language and Teaching*, Vol. 2 No. 5, pp.1111.

- Mouton, J. 1996. *Understanding Qualitative Research & Evaluation Methods*. London: Sage.
- Mukheibir, C. 2008. *Assistive Technology handbook and AAC handbook*. Northgate: Inclusive Solutions.
- Muter, V., Hulme, C., Snowling, M.J. & Stevenson, J. 2004 Phonemes, rimes, vocabulary and grammatical skills as foundations of early reading development: *A longitudinal study*. *Developmental Psychology*. 26, 683-697.
- Myers, M.D. 2010: *Qualitative Research in Business & Management*. London: Sage.
- National Reading Panel. 2000. *Teaching children to read: An evidence based assessment of the scientific research literature on reading and implications for reading instruction*. Washington, DC: National Institute of Child Health and Human Development.
- Navsaria, I. 2011. 'It's not just the learner, it's the system!' Teachers' perspectives on written language difficulties: Implications for speech-language therapy. *South African Journal of Communication and Disorder*. Vol 58 (2).
- Ndlovu, N.S & Lawrance, D. 2012. *The quality of ICT use in South African classrooms*. Johannesburg: University of Witwatersrand.
- Nel, N. 2007. Second Language Difficulties in South African Context. In. Landsberg, E., Kruger, Department of Education D. & Nel, M. (Eds.), *Addressing Barriers to Learning: A South African Perspective*. Pretoria: Van Schaik.
- Nel, 2006. *Teaching Practice Inclusive Education: Barriers to learning*. Pretoria: University of South Africa.
- Ngwenya, M.D. 2003. *The imaging technique as learning support for educationally disadvantaged learners in the secondary school, to improve reading comprehension*. Pretoria: University of Pretoria.
- Nieuwenhuis, J. 2011. Introducing qualitative research. In Marie, K.(Ed) 2011. *First Steps in research*. Pretoria: Van Schaick.

Nieuwenhuis, J. 2011. Analysing qualitative data. In Marie, K.(Ed) 2011. *First Steps in research*. Pretoria:Van Schaick.

Oxford English Dictionary. 2012. UK: Oxford University Press.

Palincsar, A.S. 2005. Social constructivist perspective on teaching and learning. In Daniels, H. (ed) 2005. *An Introduction to Vygotsky*. New York: Routledge.

Paratore, J.R. & Dougherty, S. 2011. *Home Differences and Reading Difficulty: Handbook of Reading Disability Research*. New York: Routledge.

Patton, M.Q. 2002. *Qualitative Research and Evaluation Methods* (3rd Ed.). Newbury, CA: Sage.

Patton, M.Q. 2001. *Qualitative evaluation and research methods* (3rd ed.). New Jersey: Prentice Hall, INC.

Plomp, T., Anderson, R.E., Law, N. & Quale, A. 2009. *Cross-National Information and Communication Technology: Policies and Practices in Education*. USA: Information Age Printing.

Power, T.J. 2006. Improving Academic Competence for All Students. *School Psychology Review*. Volume 35. (3) pp 339-340.

Prinsloo.E. 2007. *Socio-Economic Barriers to Learning in Contemporary Society*. In *Addressing Barriers to Learning: A South African Perspective* (Lansberg, E. Kruger, D & Nel, N. eds). Pretoria: Van Schaik Publishers.

Reyhner, J. & Hurtado, D.S. 2008. Reading First, Literacy, and American Indian/Alaska Native Students. *Journal of American Indian Education*, 47 (91), 82-95.

Reynolds, D. 2001. ICT in Education: The future research and policy agenda. In *Proceedings of the Building an ICT Research Network Conference*. Retrieved May 12 2012 from <http://www.becta.org.uk/research/reports>.

Reynolds, D. & Nicolson, R. 2006. *Follow-up of an Exercise-based Treatment for Children with Reading Difficulties*. UK: Wiley InterScience.

Reutzal, D.R. & Cooter, R.B. 2010. *Connecting Transactional Theories of Reading Process and Comprehensive Reading Instructional Practices*. USA: Boston.

Richek, M.A., Caldwell, J.S., Jennings, J.H. & Lerner, J.W. 2002. *Reading problems: assessment and teaching strategies*(3rd ed.). Boston: Allyn & Bacon.

Rizvi, F., Engel, L., Nandyala, A., Rutkowski, D. & Spark, J. 2005. *Globalization and Recent shifts in Education Policy in the Asia Pacific: An overview of some critical issues*. USA: University of Illinois.

Rosnow, R. & Rosenthal, R. 1996. Second Edition. *Beginning Behavioral research: A conceptual Primer*. New Jersey: prentice Hall.

School Psychology review, 2006, Volume 35, No. 4, pp. 621-626.

Satya, R.K. 2008. *Modern Methods of Teaching English*. New Dehli: APH Publishing corporation.

Schunk, D.H. 2004. *Learning theories: An educational perspective* (4th ed.). Columbus, OH: Prentice-Hall.

Schurink, W., Fouche, C.B & Devos, A.S. 2011. Qualitative data analysis and interpretation. In. Devos, A.S., Strydom, H., Fouche, C.B. & Delport. C.S.L.(Eds) 2011. *Research at Grass Roots:For the Social sciences and Human Service Professions*. (4th Ed). Pretoria:van schaick.

Sewel, M. 2001. *The use of qualitative interviews in evaluation*. Retrieved June 17, 2010. from <http://ag.arizona.edu/fcr/fs/cyfar/intervu5.htm>.

Shanker, J.L. & Ekwall, E.E. 1998. *Locating and correcting reading difficulties*. (7th ed). Upper Saddle River, ND: Merrill.

Smith, S.M. & Albaum, G.S. *Fundamentals of Marketign Reasearch*. United States of America: Sage.

Smith, A.C., Foko, T. & Van Deventer, A. 2008. *Quantifying the visual perception skills of pre-school testees using a novel tangible electronic test instrument*. Pretoria: CSIR.

Snelgar, E.C. 2010. *Semiotic Anomalies in English, as Second Language of learners of immigrant parents acquire first time literacy*. Pretoria: University of South Africa.

Sommer, B. & Sommer, R. 1997. Fourth Edition. *A practical Guide to Behavioral Research: Tools and Techniques*. New York: Oxford University Press.

Sousa, D.A. 2005. *How the Brain Learns to Read*. California: Corwin Press.

Strydom, H. 2011. Ethical aspects of research in the social sciences and human service profession. In. Devos, A.S., Strydom, H., Fouché C.B. & Delport. C.S.L.(Eds) 2011. *Research at Grass Roots: For the Social sciences and Human Service Professions*. (4th Ed). Pretoria: van Schaick.

Strydom, H. 2011. Sampling in the quantitative paradigm. In. Devos, A.S., Strydom, H., Fouché, C.B. & Delport. C.S.L.(Eds) 2011. *Research at Grass Roots: For the Social sciences and Human Service Professions*. (4th Ed). Pretoria: van Schaick.

Swart, E & Pettifer, R. 2005. A framework for understanding inclusion. In Landsberg, E., Kruger, D. & Nel, M. (Eds.), *Addressing Barriers to Learning: A South African Perspective*. Pretoria: Van Schaik: 3-21

Taylor, B. Harris, L.A. and Pearson, P.D. 1988. *Reading Difficulties: Instruction and Assessment*. New York: Random House.

Terre Blanche, M. & Durrheim, K. 2010. Histories of the present: social science research in context. In Terra Blanch, M., Durreheim, K., & Painter, D. (Eds) 2010. *Research in Practice: Applied Methods for the Social sciences*. South Africa: University of Cape Town Press.

Terre Blanche, M., Kelly, K. & Durrheim, K. 2010. Why qualitative research? In Terre Blanche, M., Kelly, K., Durrheim, K & Painter, D. 2010. *Research in Practice*. Cape Town: University of Cape Town Press.

Terre Blanche, M & Durrheim, K. 2002. *Research in Practice*. Cape Town: University of Cape Town Press.

Tilstone, C., & Layton, L. 2004. *Child development and teaching pupils with special needs*. London: Routledge Falmer.

Turan, G. & Gül, G. Acquisition of Phonological Awareness. *Skills Educational Sciences: Theory & Practice* 8 (1) January 2008: 279-284.

United States. *NO Child Left Behind Act* (2001).

Van der Riet, M. & Durrheim, K. 2010. Putting design into practice: writing and evaluating research proposals. In Terre Blanche, M., Kelly, K., Durrheim, K & Painter, D. 2010. *Research in Practice*. Cape Town: University of Cape Town Press.

van Wyk, G & Louw, A. 2008. *Technology-Assisted Reading for Improving Reading Skills for young South African Learners*. Johannesburg: University of Johannesburg.

Vaughn, S., Bos, C.S. & Schumm, J.S. 2003. *Teaching Exceptional, Diverse, and At-Risk Students in the General Education Classroom* (3rd ed.). Boston: Allyn & Bacon.

Vosloo, S. (2009). The effects of texting on literacy: Modern scourge or opportunity. Retrieved June 26, 2013, from www.siu-voss.net/Voslo_effect_of_texting_on_literacy.pdf.

Vygotsky, L. 1978. *Mind in Society: The development of Higher Psychological Processes*, ed. Cole, M., John-Steiner, V., Scribner, S. & Souberman, E. Cambridge, M.A: Harvard University Press.

Wagner, G. & Hosier, M. 1960. *Reading games: strengthening reading skills with instructional games*. New York: Macmillan.

Waite, M. 2012. *Oxford English Dictionary*. Great Britain: Clays Ltd.

Wassenaar, D.R. 2010. Ethical issues in social science research. In. Terre Blanche, M., Durrheim, K., & Painter, D. (Eds) 2010. *Research in Practice: Applied Methods for the Social sciences*. South Africa: University of Cape Town Press.

Wearmouth, J., Solaer, J. & Reid, G. 2003. *Meeting difficulties in Literacy Development: Research, policy and practice*. New York: Routledge Falmer.

Weaver, G. C. 2000. An Examination of the National Educational Longitudinal Study (NELS:88) Database To Probe the Correlation between Computer Use in School and

Improvement in Test Scores', *Journal of Science Education and Technology*, Vol. 9 No. 2, pp.121-33.

Webster, M. 2003. *Merriam-Webster Collegial dictionary*. Springfield: Online dictionary.

Welman, J.C., Kruger, S.J. & Mitchel, B. 2011. *Research Methodology*. (4th ed). South Africa: Oxford University Press.

Welman, J.C., Kruger, S.J. & Mitchel, B. 2005. *Research Methodology*. (3rd ed). South Africa:Oxford University Press.

Welman, J.C., & Kruger, S.J. 1999. *Research methodology for the business and administrative sciences*. Johannesburg: International Thompson.

Wenglisky, H. 1998. Does It Compute? The relationship Between Educational Technology and Student Achievement in Mathematics, Education Testing Service, Centre, Princeton, New Jersey. Available from: <http://www.ets.org/research/pic> [Accessed January 24, 2012].

Westwood, P. 2011. *Commonsense Methods for Children with special Educational Needs*. New York: Routledge.

White, C.J. 2004. *An introduction to research methodology*. Pretoria: Ithuthuko Investments.

William, 2006. *Research Methods: Knowledge Base*. New York; Cornell University. Available at <http://www.socialresearchmethods.net/kb/index.php>. Accessed 07/04/2011

www.pirls.bc.edu/pirls2006intl_rpt.html. Accessed 14/01/2011

Wilson, 2012. *Classroom-based Research and Evidence-based Practice: A Guide for Teachers and Students*. London: Sage.

Wilson, G., Nash, M. & Earl, G. 2010. *Child Language Teaching Therapy: Supporting students with language learning difficulties in secondary schools through collaboration: The use of concept maps to investigate the impact on teachers' knowledge of vocabulary teaching*. Retrieved May 28, 2013, from <http://cit.sagepub.com>

Woolfolk, A. 2007. *Educational Psychology* (10th ed). United States of America: Pearson Education, Inc.

Yeats, W.B. 2010. *Early Reading: Igniting Education for all. A report by the early Grade Learning Community of Practice*. Research Triangle Park, NC: Research Triangle Institute.

Yorke, C.L. 2008. *Promotion of Inclusive Education by Learning Support Teacher concerning Foundation Phase Numeracy and Literacy in Gauteng Independent Schools*. Pretoria: University of South Africa.

APPENDICES

APPENDIX A: GDE research approval letter



education
Department: Education
GAUTENG PROVINCE

For administrative use:
Reference no. D2012/108

GDE RESEARCH APPROVAL LETTER

Date:	8 July 2011
Name of Researcher:	Mphahlele R.S.S.
Address of Researcher:	135 Phudufufu Street Atteridgeville 0008
Telephone Number:	073 898 7987
Fax Number:	086 668 7987
Email address:	shilamass@yahoo.com Shila.Mphahlele@gauteng.gov.za
Research Topic:	Information Communication Technology as a support mechanism for learners experiencing learning difficulties
Number and type of schools:	TWO Primary Schools
District/s/HO	Tshwane South

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*

1

Making education a societal priority

Office of the Director: Knowledge Management and Research

9th Floor, 111 Commissioner Street, Johannesburg, 2001
P.O. Box 7710, Johannesburg, 2000 Tel: (011) 355 0506

Email: David.Makhado@gauteng.gov.za
Website: www.education.gpg.gov.za



Research Ethics Clearance Certificate

This is to certify that the application for ethical clearance submitted by

RSS Mphahlele (33130930)

for a M Ed study entitled

**Information communication technologies as a support mechanism for
learners experiencing reading problems**

has met the ethical requirements as specified by the University of South Africa
College of Education Research Ethics Committee. This certificate is valid for two
years from the date of issue.

A handwritten signature in black ink, appearing to read "CS le Roux".

Prof CS le Roux
CEDU REC (Chairperson)
lrouxcs@unisa.ac.za

23 October 2012

Reference number: 2012 OCT/ 33130930/CSLR

APPENDIX C: Letter to the Principal requesting permission to conduct research at the school.

Enq: Mphahlele R.S.S.

Institution: UNISA

Student

Number: 33130930

Contact details:

0738987987

shilamass@yahoo.com

Dear principal

I Mphahlele R.S.S. a UNISA student who is doing Masters (Inclusive Education) hereby request permission to conduct focus group interviews with the members of the SBSTs (6) and individual interviews with the LSEs. The title of my study is **Information Communication Technologies as a support mechanism for learners experiencing barriers to learning**. I will require approximately one and a half hours for each session. Additional 10 minutes (afterwards) is required for reflection on the focus group interview process. I have permission from the GDE research unit to do the interviews (see approval letter attached). I will ensure confidentiality and the participants will need to read the consent form attached and give written permission that they are willing to participate voluntarily. Your assistance in this matter will be highly appreciated.

Kind regards

Mphahlele R.S.S.

Appendix D: information sheet

**Information Communication Technologies as a support mechanism for learners
experiencing reading difficulties**

Dear Participant

You are hereby cordially invited to participate in the following study project:

**Information Communication Technologies as a support mechanism for learners
experiencing reading difficulties**

The main purpose of this study is to explore, explain and describe the experiences of intermediate phase teachers in two public ordinary primary schools who use ICTs in their teaching and learning activities.

Participation includes participation in focus group interviews, individual interviews and observations. SBST members will take part in the focus group interviews while LSEs will participate in the individual interviews.

During the focus group interviews, teachers will be selected at random for participation in the discussion. Participation is voluntary and participants may withdraw their participation at any time

Confidentiality: Each participant will receive a participation number at the commencement of interviews that will serve as reference throughout the period of participation. This is to ensure anonymity and confidentiality. There will only be one list linking each participation to his/her participation number for the purpose of contacting participants for the focus group interviews.

Please be assured that information obtained from these interviews will be held in safe keeping, for the access of the researcher and the promoter only.

No direct benefits will accrue and no compensation will be paid to participants for their participation in the study. The results of this study will be reported to the Department of Education, and will be submitted for publication in scientific journals.

This study has been submitted to the UNISA's Ethics Committee for approval.

Should you have any queries regarding this study please contact Shila Mphahlele at 073 898 7987/shilamass@yahoo.com or Prof Nel at 083 660 9219/nelnm@unisa.ac.za (during office hours).

APPENDIX E: Interview Schedule

Type of interview	Duration	Number of participants	Number of questions to be asked	Venue
Focus group	One and half hours	6	6	School A
One-on-one interviews	One hour per individual participant	2	6	School A
Focus group	One and half hours	6	6	School B
One-on-one interviews	One hour per individual participant	2	6	School B

APPENDIX F: Classroom observation schedule

CLASSROOM OBSERVATION SCHEDULE				
Date	Observed activity	Start time	Finish time	Notes, comments or reflections
	ICTs available/used in the classroom/school			
	The way teachers use ICTs in the classroom			
	The learning support given to the learners experiencing			
Dates will be inserted after the final arrangements with the schools				

APPENDIX G: Informed consent form for participants.

**Information Communication Technologies as a support mechanism for learners
experiencing barriers to learning
Informed Consent form**

I, _____ (participant's
full name)

consent / do not consent

to participate in the research project by being part of a focus group discussion on
August 2012 at Primary school.

I acknowledge that

- I have read and understand the participant information sheet
- I understand that my privacy will be maintained at all times and I will not be identified in any research report or publication
- I participate voluntarily, knowing that I may withdraw from the study at any time with no negative consequences.

Signature: _____ **Date:** _____

APPENDIX H: Interview questions

Appendix B: Interview questions

1. How do you deal with the needs of all learners experiencing reading difficulties in your classroom?
2. What is your understanding of a support mechanism for learners with reading difficulties?
3. Tell me about your learning support experience with learners experiencing reading difficulties?
4. How do you use ICTs in your teaching and learning activities?
5. How do you see yourself using ICTs to support learners experience reading difficulties?

APPENDIX I: Interview transcripts

	Transcription
I	<p>Okay let's start with the introductions once more. My name is X and - uh - the title of my study is Information Communication Technologies as a support mechanism for learners experiencing reading difficulties. I think all of you have read the information sheet that explains the whole process to say your confidentiality is going to be ensured and you are going to address you as Teacher A, B, C, D up to F.</p> <p>And then if at some stage you wish to get the results of this interview you are welcome to do so. My contact numbers are at the end of the information sheet that I provided and you can contact me at any time. And again the only people who are going to be - to have access to this information is myself and my supervisor, Professor X. So like I said your confidentiality is going to be ensured and I'm with Mr X. He is my colleague from Unisa.</p> <p>I'm going to start with the questions but before I start I just want you to introduce yourselves. Not your real names of course just to say maybe you are an HOD or a teacher and then what is your role in the classroom. Because you - you know we've got different types of teachers. We do have remedial teachers, we do have - uh - some they call themselves SN teachers. We do have teachers who support learners with specific problems. We do have school based support team members with different roles.</p> <p>You find that on the school based support team maybe you are a language expert, you are the one who helps with language matters or you help with math matters. Whatsoever I just want you to briefly indicate your role in - in - in the school. We can start with Teacher F.</p>
TF	<p>-Mm (clears throat) I'm an educator. Uh - I teach English - English predominantly in grade 7s. And my role here in our school is to provide learners - uh - with support in English, ja. And those who are struggling so that at the end the learner must be able to read, basic reading and writing.</p>
I	<p>Okay. Teacher C?</p>
TC	<p>I - I'm an HOD. Who supports learners in the classes. We have got - uh - the timetable on daily basis where we are support those learners. And in some cases we are supposed to teach them because you find that other teachers are absent from school so we occupy</p>

	those classes and teach those learners.
I	So you sometimes ... a relief teacher?
TC	Ja. Sometimes as a relief teacher. Ja.
I	Okay. Teacher A?
TA	Okay. I'm also a teacher and also a member in an SBST. I also help teachers with alternative intervention strategies to the learners that are battling with reading and writing.
I	Okay. Teacher E?
TE	I'm a teacher in grade 2 and I'm a member of the SBST. Uh - my role in the SBST, I'm a scribe. But at the same time I also help with learners who are struggling to read and write.
I	Being a scribe can you explain further to say what exactly do you scribe?
TE	During the meetings I scribe - uh - about - let's say we have a learner in a certain class who has - uh - barriers in reading. Then in our meetings we discuss about that particular learner and then we look at how can we help that particular learner and then the remedy that we are going to give that particular learner. That's what we discuss mostly in our meetings.
I	Okay. So when you talk of a remedy are you not referring to more of the medical model? I hear you using medical terms and nowadays we - we are moving away from medical model to inclusive.
TE	Yes. We - we are - uh - as the school we are - uh - an in - inclusive school so we - we use - um - different methods of helping that - the learner. So in our meetings we discuss those methods. Yes.
I	Teacher B?
TB	I'm a teacher. Uh- I teach Afrikaans in grade 4, 5 and 6.
I	Wow. Is Afrikaans still alive in our African schools?
TB	Yes. It's alive and kicking in the X Primary school. Yes.
I	Okay. So jy kan Afrikaans praat?
TB	Ja ek kan Afrikaans praat. Ja and I'm helping learners with afrikaans though they are not Afrikaans speaking learners. But as far as I'm concerned most of them really they can do their best. And I'm also a member in SBST.
I	What's your role in the SBST?

TB	The unfortunate part of it I did not yet attended the meeting of the SBST. But my role is to help the learners with reading and the writing part of it. Thank you very much.
I	Alright. Teacher D?
TD	Uh - I am an HOD overseeing English and Afrikaans. And I am a coordinator of SBST in the inter... phase. And my role is to coordinate meetings - uh - to develop programmes for the learners who are experiencing learning barriers in order to support them. Uh - in conjunction with the language teachers and our - I don't know el - LSAN or what teacher
I	Learning Support teacher -
TD	Ja learning support educator, Teacher A. Uh - and we hold meetings with our English experts and maths in order to - you know - discuss the learner's problems. The barrier that they are experiencing and to come with - uh - you know - further mechanisms to can support the learners. And also liaise with the parents of the learners who are experiencing ... So they know what do we - you know activities that are being done with their - with their children.
I	Okay. So do you get the support - full support from the parents?
TD	Uh - we cannot full - say full support because - you know - the intense - uh - part of the SBST has started now since Teacher A came. You know. We works - we are getting the support but we have - we are going to intensify the support that we need in order to - to - to - to implement the inclusion curriculum that we are going to implement as a school.
I	Mm. Okay. So I would like to know that - how do you deal with the needs of all learners experiencing reading difficulties in your classrooms. You know reading difficulty is a kind of a vast problem because you might find that this learner is experiencing reading difficulties but specifically maybe spelling. And this one is experiencing reading difficulties but specifically maybe - uh - perceptual problems. So I just want to know how do you deal with the needs of all of them. Because if there are now a bunch of learners experiencing different reading difficulties in one classroom how do you deal with that as a teacher. Anyone? Teacher E?
TE	Since we are a full service school we are catering learners with learning diverse. In our classes there are learners that are experiencing different barriers so the method that we opt to use is the multi-sensory approach teaching. There that approach it encourages learners to use all their senses. Ja. In applying their reading strategies. This multi-sensory approach it also integrates all the three systems, the seeing and the hearing, the touching and the - and doing the movement.

	<p>So in the part of seeing we are doing visual activities where learners are introduced into letter sound association. Where learners are doing word attack skills ne? In word attack skills learners are introduced in recognising that in a letter we've got - in a word we've got the first letter, the middle letter and the final one to - to know how to read the - the whole letter in full and create a sentence and construct a sentence to a paragraph.</p> <p>We also encourage our learners to use magazines and newspapers ne? To identify or to circle, to cut out words, to build sentences again. And we also encourage them to - uh - compile their own list of words, also to compile their dictionaries with meaning in each word. Okay?</p> <p>And in hearing, the auditory part, we encourage learners to look and say the word. And again they should also apply their syll - syllabification skills. They must cut a word into smaller units for them to recognise the prefix and the suffix. Alright. And also again we are encouraging - we are encouraging our learners to do the paired reading and the group reading. Again for them to learn other skills from their peers. Alright.</p> <p>And then in kinesthetic and tactile is where learners use their own bodies to experience letters of sound. They form letters with their bodies. They cut out words, they trace words. You know they use - uh - text materials to know how to formulate letters.</p>
I	Okay. I'm interested in the forming letters with their bodies. How do they do that?
TE	Okay. Uh - first of all there will be a chart, letter chart in front of them. Ne? I will encourage them to try to imitate the shape of the letter. Ja. Using their fingers or their body. Yes.
I	Okay. Another one? How do you deal with the needs of the different learners? Teacher C?
TC	Ja. Currently - uh - we are doing - we have the support class. I can say the remedial class that they've come up with. So that from 8 o'clock to 9 o'clock from Monday to Thursday where all those learners with barriers are in one class and trying to - you know - to make sure that learners do improve when they go to the next grade next year. So we have come up with that for the fourth term where we give them enough support in the morning from 8 to 9 o'clock.
I	What kind of activities do you focus on during that period of 8 to 9?
TC	We have planned for the reading and the writing. Maths and English activities. Yes.

I	Alright. And then -
TC	So dealing mainly with the basics because we know that those learners lack the basics.
I	Is it meant for - which phase that class? It's all the phases or it's - it's only one grade or how is the class?
TC	The grade 1s are combined together in one class. The grade 2s like and then the grade 3s. Ja.
I	Okay. Alright.
?	To add on what she was saying about the morning session programme it's a sort of curriculum adaptation. Ja. The activities that has been prescribed by GPLSM, ne, we come up together and try to do simplification. We adapt what they were supposed to have done. We are doing the backtracking, focusing on the programme that has been designed for them. Yes,
I	Okay. Another one? Teacher E? How do you deal with the ... of your learner?
TE	Unfortunately for me right now as they have stayed for term 4, I'm in my class and the - the - the HOD - the HOD is the one who is handling the - the class of those learners who are having - uh - learning difficulties.
I	I mean throughout the year like from January up to now ... in your clas, how - how are you dealing with -
TE	Okay. In my class - okay in my class from January I started with the - uh - simple test where - where learners have to write - let's say the - in mathematics they have to write numbers. Let's say number 1 up to 20. They start with the numbers, the symbols and the names and then we discover that some learners they can't even write the number 2. They write it vice versa. Then - it's then that I discover that this child has a problem. That's how I start.
I	So you - you do your identification.
TE	Yes. That's how I do it. And in English I start with the - uh - three letter words whereby learners have to write - let's say words like (clears throat) leg, bus, man, mat and then you discover that some learners they can't even write those words but they've done them in grade 1. And I'm a grade 2 teacher. It's then that I discover that this child needs some help. Yes.
I	Okay. And then because you - you are - it means you are going to identify -
TE	Yes I'm going to -
I	Uh - uh - uh - needs - uh - around those learners when they are doing that test.

TE	Yes.
I	So now for you to give them support, how do you do it? Do you do individual support? Do you do group support? How do you support them? After identifying their needs.
TE	After identifying them I put them in a group of learners who are having those - those problems. And then from there within a group you will discover that some learners it's - it's a matter of - uh - you - they - they - they forget to put the vowel maybe. And then as time goes on that child is able to do it. Then that child is taken out of that group.
I	Okay.
TE	Mm. that;s how I do it.
I	Teacher B?
TB	Okay. In my language the - the one that I'm teaching, when we read we start with the difficult word but before we start with that we do sounds because they are learning Afrikaans in grade 4. So we start with the sound, they sound the words, the - the - the - the - the - they say the - the sounds. Then we form words out of that. And then from there, from the passage we look - we find the - I ask the learners to look at the words that have the sound that I've written in the board. So that they can be able to read and understand the meaning of those words. Before we start with reading.
I	Okay. The - the Afrikaans sounds, are they similar to -
TB	The English one. No they are not.
I	- the English sounds. So are they difficult for them or are they easy?
TB	Ah they are easy. But you know our children they - they grasp you know. They - they have a problem of grasping things things quickly. Mm. Due to some problems that - uh - we cannot even say we can help them with.
I	Alright. Mm.
TB	But they are simple.
I	So how do you provide your support to them after you identify their problems?
TB	Uh - after identifying their - their problems I let them read the words. I read the word for them, they read after me. And then I say they must look for the words of the same sound from the story. Then we read those words, we explain them. That's where I introduce also the use of a dictionary. So that they can be able to use a dictionary finding the meaning.
I	Okay. So you mainly use stories so that they can -

TB	The stories, yes.
I	Okay. Teacher D?
TD	<p>Mm - okay. Uh - I - I realise that - you know - for our learners to experience especially reading and writing difficulties it's because of - you know - the sounding of the words. Ja like maybe you've got like -uh - teacher E indicated some the words - uh - I - I - I usually take the example of God. Ne? For example. To write it on the chalk board for the learner to - to read the - the letter. The - the - the word. And then those who know will indicate it's God. But for those who don't know they cannot identify - you know to - to - to sound the - the guh, the oh and the duh.</p> <p>So usually I put you know the alphabets on the chalk board to say, can we read this? And then they read a-b-c-d-e-f up to z. And then I say, now read this word, it's God. And then I say, why not - let - let's forget the alphabets and then we call the sounds. Because they were easy to say a up to z. So it's then that the learners realise that it is guh. It's eh, buh, cuh, duh, eh. You know we - we read them as sounds. And then they realise it's guh, it's oh, it's a duh.</p> <p>And then if you teach them sounds- I realise that if you teach them - you turn the alphabet into sounds then it simplifies you know the difficulties of those who cannot identify the sounds in terms of where they cannot read the word God or cat. Because it's a-b-c. But when they are supposed to read it it's cuh, it's cat. So that's why we turn the - the alphabet into sound then it's eh, buh, cuh. Then when they see cat they say cuh, it's eh, it's tuh.</p>
I	From what you are saying I - I get the point that - uh - you mean the manner in which we've been teaching the alphabet actually was wrong. Because like even myself, when I was taught the alphabet it was a-b-c-d and we were even taught how to sing them. And then in that manner, that's why now we - we - we have a difficulty of reading when - when you see a enw word because in your mind you've got the name -
TD	It's see.
I	- the names of the letters not the sound -
TD	The sounding of the letters.
I	So what you are saying is that maybe we need to change the manner in which we are teaching the letters of alphabets.
TD	If maybe we can - that - that's my opinion. If we can maybe change the - we - we don't emphasise on the - on the naming of the - those - you know - letters. We emphasise on their sounding because that's what the learners use when they read. You know. And I

	<p>was sharing with - uh - Teacher A to say, after I've realised the problems of most of our learners here, you know, I grouped - I - the oh that are being sounded in English, all of them.</p> <p>Like po, po. It's po and the - uh - the syllable eh and oh. You know. Eh and oh it's one sound. So when you write on the chalkboard it's as if you're write pee oh pee oh. So I identify all the ohs that are sounded in English and then I identify all the ees in terms of this ee. The ee of double eh the ee of - you - you meet me in town. Then the ee of meat that I eat, the me - the ee of field, soccer field. All those are ees. You know you give to the learners to - to form words along those ... those sounds.</p>
I	Okay. That's - that sounds great.
TD	And - ja. So that's how I tackled my - my - my - my - my barriers to my learners. In fact reading and writing because they need to be able to can read the word by being able to can write, to can spell it in terms of their sounds. And I - I - and I emphasise that when you listen to radio you hear sound for yourself to be able to can understand what the - the - the - the singer is saying. And even when we speak now you hear my sound. You know. So they need to listen a lot to the sounding.
I	Okay. The listening skills. Teacher F?
TF	<p>So much has been said here - uh - and you know as being a teacher you will almost do the same thing. But with me in particular - you know - as early as - you know in grade 7 as early as the beginning of the year -n uh - you know we have the - you know on our - on our timetable ne? School timetable we have got the - ... problem period. Ne? I normally come thrice a week. Ne? So normally I make a point that I make use of that period. As early as term 1 you know I utilise it.</p> <p>I will do spontaneous - you know - uh - questions, reading. I will ask just the learner, though I'm not a maths teacher but I have interest there, tell me, 6 times 4, 3 times 1, they will do this for ten minutes and from there you could pick up that you know if a child is in grade 7, is battling - battling to get 3 times 5 then you check, wena, ... your name. You know. Or it's just a - the word for me. So this is how I normally do - uh - I do it spontaneously. And from there how do I move on.</p> <p>I then - I like to do individual - uh - programme with the learners. You know I will tell the learner, come and see me during break time or after school. Okay. I will give the child maybe five words. Go and make sentences with that. And though it might not be regularly but what i- I've realised, maybe ... I keep the - I keep it consistent. Like - uh - as in term 4 I mean I say, hey, X, remember how far are you? Point the dictionary</p>

	<p>book. How far are you with the words? Can I see the sentences that you made this far?</p> <p>You know and then other kids start to realise, oh okay Ma'am is still following that all. You know instead of making it follow up. So that's how I normally work with the learners. And it has - it has worked good. Ja. Even those - uh - battling seriously you know. If a child is willing to work you know, is - is willing to say, remain behind and he does, you will see at the end you know - at the end is to see a child being able to read - you know - like she says - uh - then since Teacher E said, you know simple words, be able - able to write and use them in sentences. Ja it makes good progress for me.</p>
I	<p>So for you because you get the learners in grade 7, the last grade of the school, is there any communication with the previous teachers? Like from the beginning of the year to say to you, this learner already has got this kind of problems before maybe you can identify them?</p>
TF	<p>Uh - seldom. I would say seldom so because some years we used to have the blue books. So now - you know - it - it has disappeared along the way. So it's kind of difficult unless if I move myself after having spotted an area which the previous teacher and I'll have a talk with her or him. And normally you find that you know if they can assist, maybe there's a problem at home. Then from there I can take it up.</p>
I	<p>Okay.</p>
I2	<p>Sorry. Uh - I hear that you - you act spontaneously. And ask questions to - to test or find out - uh - a problem. Whether a child has a problem or not. I just want to know, don't you have a - those former remedial classes here? Or a call, remedial class?</p>
TF	<p>No we don't. Unless I just heard Teacher C indicating that they have started it in foundation. Maybe with the help of Teacher A because she - she has just joined us and she's - ja. So unless if it's coming to us but for now we don't have spec - specific class. We don't. In senior phase.</p>
I2	<p>And also you - because if you have - uh - uh - what else - PST you sometimes have to develop - uh - um - I - ISP or IEP. ISP ja. Individual Education - ja plan. You're saying you - you do them - uh - informally. So I've never heard anybody talking about that but I realise that you - you say you - you see them - um - you see them after work -</p>
?	<p>Individually.</p>
I2	<p>- individually. You see - so I was - I was wondering whether you are not doing it formally with the recommendation of SBST.</p>
TF	<p>Okay. Uh we - we have been given that by Teacher A like I - I have indicated. She has just joined us. Last - was it the last meet last term? Ja. So she has spoken about it and</p>

	like I said from the beginning so we haven't yet - you know - done it formally. But she has given us the forms in term 4 so hopefully next year as early as January we'll be working on that.
I2	Mm.
I	Okay. Um - what is your understanding of a support mechanism especially for learners with reading difficulties? If like you have to explain to somebody who does not know anything about a support mechanism. How will you be able to explain that to somebody? You - your own understanding of a support mechanism.
?	Okay. Uh - a support is I would say it is an approach, ne - of finding a way of doing the backtracking. Because these learners are encountering barriers to learning in a different way. This learner will be having some language problem due to spelling. I need to come up with a strategy on uplifting the spelling pro - programme. Not necessarily giving that child list of words to - to read. I will come up with a mechanism of stimulating - ne - stimulating the - maybe visual discrimination. Ne? How to make a differences between two letters that nearly looked the same. I'll come up with a strategy to can identify the differences.
I	Okay. Other ones? Your understanding of a support mechanism? Teacher F?
TF	Um (laughs) I would say - uh - it's a way or ways in which the educator tries to meet the needs of a particular learner.
I	Okay. Others? Teacher B?
TB	Uh - I would say it's a way or a method that a person can use to help a child or to close the gap of a learner that the learner is having so that he can be accommodated. And also in helping him or her to read alone.
I	Okay. Teacher D?
TD	Mm. A support mechanism I - you know - it's the - the - the methods that we use to - to - to support the learners who are experiencing learning difficulties in terms of writing and reading. You know a programme is developed after the learner - you know the - the - the problem have been identified. What can be the - the - the - the learner's prob - problem in terms of not being able to read and write. So after it has been identified then you - you develop a strat - a strategy to can remedy - you know try to read - remedy the - the - the learner's problem.
I	Okay. So to - to understand what you are saying you mean that - uh - the - the mechanism the support mechanism should be specific to that problem that you identified.
TD	Ja it means to be specific but in terms of us educators it - we cannot be specific. You know we - we - we come across a learner who we - we see the learner cannot read or

	write. But what are the specific problems which need a specialist in terms of - some we - we realise that it's - you know - the - the eye side, some is the hearing. Some is the - you know - their way of - whatever maybe. Home problems social problems and so on. So the - the problems are many. So but for us to can identify them specifically it's - it's - I - I think it's not at our level. They need a specialist.
I	So I mean but in terms of - for example you focus on your reading difficulty. And then you are only focusing on that.
TD	On that. Not the other -
I	Yes we know other problems can contribute to what - uh - the - the main problem which is reading. For example you might find that you - you - you think this learner cannot spell words correctly but only to find this learner has got visual problems.
TD	Visual problems.
I	Yes. But - but there are those learners that you might find is pure reading difficulties without other additional or other external factors in place in the ... in terms of those ones. Then you can be able to identify your support mechanisms to say - like I heard Teacher A explaining that of - of - of words wherein maybe you want the learner to identify certain letters which are similar. Ja. Like - I mean - by so being specific I mean stuff like that.
TD	Ja. Like learners who - who - you come across learners who are supposed maybe to write a book. You know they will write a dook.
I	Okay yes.
TD	Where they are supposed to write a duck they will write a buh. You know?
I	Ja.
TD	So all those. And where learners are supposed to write- you know I - the pool for example. That's where you - you see they've got a common - then you - uh - you develop a common strategy. In terms of learners to be able to I can - identify the words so that they can be able to read them and be able to spell them.
I	Ja. Teacher E? Your understanding of the support mechanism?
TE	(clears throat) Support mechanism - uh - in my experience in Foundation phase - um - I've realised that some learners they come into grade 2 having a problem with - uh - pencil grip. When the learner is supposed to use those - the fingers correctly you find that the - the - the fingers - the way that the child handles - handles the - the pencil, he handles it in a way that is not appropriate.

	And you have to help that child and show the child how to handle that pencil. Because when the child is - is supposed to write - uh - on the book you find that the way of writing, that child is not able to write on the line. So it's a problem.
I	Okay. So now you've come up with a mechanism -
TE	Yes. Of how to handle that pencil. Yes.
I	Alright. So can you be able to tell us about your learning experience? From what you've been saying now I can tell you are all support teachers. You are supporting these learners. Can you be able to share with us the support experience that you've had especially learners with reading difficulties. It can be a good experience and a bad experience. As I say, something that you - you are willing to just share with us to say, this is what I experienced maybe with a certain learner in a certain grade. And how successful it was and how unsuccessful it became.
TE	<p>Okay. So in - most of our learners that are battling into reading, you find out that the learner has not yet grasped the basic phonics even in grade 7. So the best thing that you need to do is to start introducing all the letter sounds. In all - all those letter sounds you start coming up with a - you divide these into groups of vowels, ne? All the vowel family. Like Teacher D was saying introducing the vowel diphthongs, ne? Those - those vowel diphthongs will - will be maybe oh sounds or ee sounds that writing them in a different - uh - uh - way. But with different sounds. You know? Ja. They - they - they - that they have been written differently but same sound. Yes.</p> <p>And again you come up with the consonants. Ne? And introduce all group of consonants being a single consonant, being consonant blends and ask the learner to design a word ne that has the initial consonant blend of BL or maybe the consonant digraph. Introduce a word with a final consonant digraph - ng N-G. Then after they have compiled all those vowel group letter sounds and consonant groups they can start now to design words with sentence even with meanings.</p> <p>Those that are battling to read they can even draw what they were supposed to have written in words. Yes.</p>
I	So I - I - I can hear that those are very good support mechanisms. What I want to hear from you is - um - an experience where maybe you used that in a - in a certain manner with a - with a group of learners and tell us how it ended up. Like I'm saying - uh - uh - learning support experience. Something that you experienced and -
I2	Um - in some other schools especially these days - uh - you find that parents are from Zimbabwe or Nigeria and then - you know - uh - our local - um - languages they don't understand. Even they also have a problem with English. Little - um with English. So -

	um - it - uh - uh don't you have - uh - cases like that here?
TE	Okay. No we meet such learners especially those learners that come from Mozambique. Ne? It becomes -
I2	Don't you have a particular experience?
TE	<p>Ja. Hence I'm saying - okay. You find that - uh - those learners are battling with the basic English words. You know the language that we are using in South Africa. Ne? So the best option to sa - to communicate - to be able to communicate with those letters, we use words with pictures. Words with action. Ne? I will introduce my topic and add on with pictures for the learner to understand the - our - our conversation. So pictures are the ones that are helping us.</p> <p>And sometimes even asking the parents because their parents, you find that they have already mastered the language. Ne? We come, we call parents to come and interpret for us until the learner grasps with the way of -</p>
I	Do you have one case that - I see Teacher C maybe we could come back to you.
TE	Okay.
I	Just an experience where you can say, I found this learner who was like this and this is what I did. And this is what happened.
TC	<p>Ja. In foundation phase this - uh - support thing, we have been - we are doing it every year. Taking learners especially the third term. When we have identified that learners have got problems and so on and putting them in one class. So you will find that learners maybe a grade 2 learner cannot read books for level - level 6 to 10. then I had to back to tell - to level 1 to 5 with those learners. Because they cannot read the grade 2 books then they - they are reading a lower - a lower level, grade 1 books, level 1 to 5.</p> <p>And of course you know at the end of the day you will find that those - those learners can read very well. Because at the same time we'll be dealing with phonics. You know. They - the - the grade 1 phonics because that - that is the - the - the foundation. The grade 1 phonics together with the level 1 to 5 readers for grade 1s. And at the end of the day you will find that learners can read very well.</p>
I	Do you have a specific case that you can share with us? That you - you supported like that?
I2	... (interrupts but inaudible) specific ...
TC	Okay. And the other one is - as

?	Can I - can I share mine?
I	Okay.
?	<p>Okay. I'll use the - this one because it makes me happy. (laughs) So I had this - ja. I - I had this - this learners, the girl. Um - it was towards - you know towards the end of term 1 that I realised that she cannot read. And I was like - I was frustrated because she's such a bubbly kid you know? And I had to stop my lesson and I said, read this word for me. The word was part and the word party is such a simple word. And</p>
I	Ja. Ja and soon the learner becomes excited.
?	<p>And I - I ... had maybe she's - she's not alright. And I said start again, girl. And she read - you know - there and I - I then went to the board. I wrote the word part. And I said, read this word for me. And she looked at it and she could not recognise it. And I said okay, we have our body - you know trying it say, this is my arm you know. So all these are body - and she said, parts. I said, oh, parts. Alright. So read here. And she couldn't.</p> <p>So I realised that she - she has a way of identifying things but cannot read. Then from there I said, you know what. Come and see me. After school we had a talk, like I always - like I said, I indicated earlier, I normally don't call others. And I said, don't you know the word party? And she said, no. Don't you go to parties? Ma'am I do. And I realised maybe it's something it's not right with the girl.</p> <p>Eh - especially by grade 7. So what I did - you know this - the foundation phase people would learn ... you know the phonics. Uh - I just said, write eh, buh, cuh. And then you say eh for apple. Buh for boy. You know? And I said she must group that in five. You know up until - it was a lot - it - eventually became a long programme. And but at the end I realised that she was missing the vowels. The problems are the vowels.</p> <p>And at the end the parents, I had the talk with the parents and they said no, the child has been ever having problems from grade 1. So and then I said, what do we do? And the father was so willing and you know - we even - eventually referred the child with the consent of the parents because they said they have realised that the child cannot read. And she's battling. She - uh - at home she even helped by the younger sister. But then she was doing grade 4. Ja. And she's now at X. Mm.</p>
I	Okay. So -
?	I think ja it ended well because I'm - she is happy there,. I once - I once met her and

	she's happy. She said Ma'am I can - now I can cope. Ja.
I	Ja. Okay. Do you have any sad experience wherein maybe you tried your best to support the learner and then you find that you always reached a block?
?	Uh - ja I do. And unfortunately it's this year. Ja. The kid does not want to respond. You call him, he doesn't want to come. He refuses profusely so. And I realised that maybe he wants to repeat for him to understand, I don't know. Because I tried to call him and he doesn't want to. I spoke to the class teacher. You know, he's not willing to cooperate.
I	And then you - you didn't check other factors that might be contributing towards the refusal?
?	Uh - not really. Not really. But you know sometimes you know as being a teacher when you call a child, for the fact that he does not know what I'm calling him for, he would have responded to it. Yes.
I	Ja. So may - maybe he needs - you need to as - as the team discuss.
?	I've reported that - I have reported it and the child doesn't - is not willing. Ja.
I2	Have you referred him to the S - SBST?
?	Yes. Ma'am is aware about him.
I2	So have you done anything?
?	Okay. As you are aware that I have just joined the school now, you know I'm - I'm still trying to com - compile the strategies on how to support those severe - vere cases. Ja.
I2	Do you - do you have any member like a social worker here in your S - SBST?
?	Yes in our list of SBST members they have got someone there. They are - they are trying to establish a network with their ... although we have never really met.
I2	Okay.
I	Okay. .. that particular question.
I2	Very interesting case.
I	Teacher D? Do you want to -
	(talking together)
TD	Ja, he wanted to know the name of the learner.
I	Not the name, no. We just - we just want you to share with us -

I2	The case. Like she was -
I	Mainly supporting -
TD	There is a learner in grade 2A. I was doing remedial last year from term 3 and 4. And then - uh - the learner is repeating this year. Then the learner was screened. Ne? And was referred to X.
I	And how do you screen? What do - what - what - do you mean
TD	No by the - the - the - the - the - we do the I - ISS ne? Ja. But - uh - according to me she - he was wrongly screened. Because he is coping very well. Even - even yesterday yes. You know I just took any book from the shelf and that learner can read very well.
I	Alright. So initially they - they said he - he's a special school candidate.
TD	Yes. But now according to my assessment there's - he does not belong there. Ja. He's doing very well.
I	Okay. So that - maybe that's why we - we need to work as a team. To say an individual cannot conclude to say this is the way. That's why now we - we've been talking about support mechanisms meaning that as a team you can come up with different mechanisms and then to see if they can work on an individual. Because now if it's X who says, I screened this learner and this learner has got this difficulty and this is how this learner should be supported, Teacher B might come up with a different version of it. So that's why we need to work as a team to - to support these learners.
I2	<p>Especially SBST. Very important because there you share ideas and also - because at first you have to - to discuss that - at that level. And then if you have a serious problem like that one you call a relevant person. They cannot always be there especially social workers or somebody from - uh - .. school. Uh - or maybe somebody from Department of Justice. So - um - when you realise that you have a serious problem you rope in that person and then - to give you more support.</p> <p>Mm. And I think that one should have been attended to long time ago. I - it's very urgent. It's very urgent. And by calling those - you know when you call a social worker from Social Development, when you call them they can - uh - they also have networks. From psychologists and ... from psychologists, psychiatrists, anybody who can help that learner. Because you know - um - they - uh - psychologists are qualified to assess deeper. Uh - so I think maybe there might - there might be other problems than - than -</p>
I	Because maybe the - the refusal -
?	But what I can say is that the SBST is functional here at school. And we have - uh - regular meetings. And even with the district people we have been having - you know -

	so many meetings. Ja. It might be maybe an omission somewhere but -
I	Ja. An oversight.
I2	.. As an HOD.
?	No he knows. She knows. Ja she knows.
I	Oh no, thanks.
?	But again to add. He - he was ... also in January. So you know the parents are aware and you know it's just that they ... he's just ...
I2	Ja because there must be referral and implementation. There must - usually - you know - um - especially us. Like - you know - you have a problem you don't implement. You know - have a nice democracy and everything but when it comes to implementation we don't have will - say ey, we have a to eradicate poverty but we don't implement. So you see - you - he has been assessed and whilst - were - were - eh - any recommendations or any one of the recommendations implemented?
?	You see there I don't know sir.
I	Uh - maybe another thing about that learner. If - is he or she? Did not -
?	It's a he.
I	It's a he. He did not want to come to you. You will find that maybe he is shy and then maybe afraid to be labelled. You see?
?	There - there can be -
I	I think you - maybe you could have used another method, maybe asked that - another teacher to call him and explain some things.
?	He's not - he's not - he's not even in my class.
I	Oh okay.
?	Ja he's in the other class. So it's not just a way to you know.
I	Ja maybe -
? because it's this year. So I start by saying, it said this ... because it's the current one.
I	Ja you would find just maybe that something wrong.
?	... because today we - we even discuss it. There will be some child to eat.
I	Teacher D you wanted to share your experience with us?

TD	<p>Mm. No you know I've got experience that you know makes me happy but - uh - there are those that - you know - remain with me in terms of you know asking myself what is going to happen with that particular learner. You know when I came into X in 1989 I was from high school. Ja. So my - I - I was supposed to scale down in terms of teaching them. We were - uh - a plus 20 school.</p> <p>So I taught English in grade 4. So it was difficult for me. I remember I used to visit Ma'am X and Ma'am X. you know to - to - to give me the - you know the strategies to scale down to the level of the learners. And what I explained earlier, that's what came to me later on. You know. The - that - that method just you know came into my head. And that's I adopt - adopted with my grade 4 learners. And - and it went well really to an extent that when they were doing grade 10 one learner wanted something ... they are from X all of them. But one was not taught by me.</p> <p>And she was asking this one - uh - this learner who was taught by me grade 4, they were in grade 10, to say can you spell for me this word. And then that particular learner said no, you cannot ask me about that. And then she made a joke and said, who taught you English in grade 4? I was taught by Ma'am X. That's why I - I - I am able even today to spell those - I can just - you know - tell you how to - she was asking her the - the spelling of beautiful. And then she said okay go and write now be-a-u-ti-ful. That is the spelling. I was taught by Ma'am X.</p> <p>And when that learner came to me and said, you know we - we once had a - a -a that game, come together and then we were discussing about our primary lives. And most of the learners who were there were taught by you in grade 4. And when we shared our experiences they said, wena, you were unfortunate because ... we were taught by Ma'am X in grade 4, English. And only to find that wena you are the only one having spelling and reading problem. ... you could ask, we - we are fine. We were able to carry it on from grade 4 up to now. And we are able to - and to her it's - it's - it's a you know it's a black mark to say, I - I could not benefit - you know?</p> <p>But my other - and you know now recently there were learners who came - got their - eh - certificates - they are doing grade 12. to say Ma'am we got -uh - uh - outstanding marks in English so they - uh - just came before, after we - we have - closed for the fourth term to say thank you. Because this was part of - most of your work. You know I was surprised to say -</p>
I	Because you - you were not aware of the impact -

TD	Ja of the impact. You know. And if some would even say how the way I - what I was explaining, to say Ma'am we - now we we - we saw it as grade 1 work. You know?
I	You know what - what you are saying it also reminds me that it - it shows grade 4 is really a good foundation. Because even myself, my grade 4 teacher I don't forget her. Fortunately when they were doing a - her work for her at her 60 th birthday, they just called me to be the guest speaker. And she was also surprised when I said, for me to be able to space I'll - I was unable to space the words. I was writing -
?	- the one word -
I	<p>- one - my sentence was one long train. That teacher in grade 4 she said to me, you must put your two fingers, after you write every word put your two fingers and then write. Even today I still remember that. In grade 4. And I still remember the way that she was singing for us. And then even now I'm - I'm - I'm I'm being a teacher even I'm no longer in the classroom. But I still remember that.</p> <p>And I even said to her you know the English that you taught me made me to be able to go to England and speak to the English people there in England. And - uh - grade 4. So what you were saying I can relate to that. To say grade 4 teachers are really the foundations of - uh - uh - uh - uh - especially when it comes to language because most of our learners they start English in grade 4. because grade 1 to 3, they do their mother tongue.</p>
TD	<p>Ja. You know whenever they - uh - they come to visit they will always - you know - uh - uh - give example - maybe a learner like make a joke and say, you used to ... look, say the words and the way I was saying them. And I could - when they have left I could say, wow. You know? And wonder. But always the one that always - is in my mind is this, the one here be-a-u-ti-ful because the way she answered this other one, this other one was very hurt. Very hurt to say, you know, you can imagine a person saying, who taught you grade 4? Now we were taught by Ma'am X. And being told about your Ma'am, - it's your Ma'am who taught me English and when are you come and ask me about spelling ... You - you know such things.</p> <p>But there is this particular learner - uh - I think this year he's doing grade 12 also. So she came last year to - towards the end of last year and she was ... at the beginning of this year to say, Ma'am, I have come across an iron wall. I cannot read, I cannot write. You know? And even my mother calls me a fool. So I want to go - what I - I - I - I - I identified my strength - uh - my strength is the - uh - beautician, to be a beautician.</p> <p>Then you know we - we - we went through many prospects of you know colleges but</p>

	<p>she was more interested in doing her ... But she - you know she came to me, she was crying. At the end of the year and the beginning of this year. But I realised ... I could not help this child. You know - uh - uh - last week I made an example, I think it was in Ma'am X to say there was this learner that we were in grade 4 and then I pronounced her name wrong to say, ... and she left me to - to - to complete my regis - my - my register calling. Say uh - X present. You know? We were in these classes. Remember the second class after the first.</p> <p>And she came to me you know, this .. .said Ma'am. She wanted all my attention so that I understood - I understood her well. That Ma'am, she stood like this. Said yes? Ah - my name is not X. My name is X. You know? And - and I - from - from then I - I could see that this child know what he wants in life. And - but the problem is reading and writing. You know up to now. That is the learner that I am talking about. That I taught in grade 7.</p>
? in your class?
TD	In grade 7. Ja.
?	<p>Ja that one. It's - it's painful when you think about it. Uh - you know she - she - she couldn't - she couldn't - it was not a ... of making .. She just couldn't. And it - okay I - I - retained her. I retained her. The reason was I was ... she repeated grade 2, grade 4, grade - grade ... ne? And I said no but - but to let you go I wouldn't do any justice. This is senior phase, it starts from grade 7 isn't it? So if I can retain her. Before I just let her go because others who - they - they - they said, but you know just let her go. She has been failing other grades as long as she has been in our school.</p> <p>And all - and I - I then - okay we had the meeting ... SBST. And she - she - she - she - we retained her. The 450s I filled them and she retained - and the parents, I called the parents and we had a talk. You know the following year thereafter she was back in the class. I asked ma'am, ne? Teacher D, to - to put her to be in my class. The reason was - my fear was to let her go and drop from her school. When I see if she can come back and give her the basics, you know, confidence. You know to be able to - to talk because she was quiet. Especially - she was a closed person. Just quiet, not - you know - she just write ... when it's on the board. Only.</p> <p>And I let her to take care of my - my stuff. My bag if I'm going to just - she was the one who took care of that. The lock up, put - putting things in order. I tell you, six months was enough. Six months was enough. Then she grew up like - you know - she - she opened up like this. You know then you call her, wena do this, you know - do that. It made her to feel that oh, I can. And hence she still talks to Teacher D. It's because now</p>

	<p>I know she won't sleep with empty stomach. That I'm - I bet it, she will go and look for work and she's going to do work.</p> <p>Ja. I love - I love her. She's held on. The confidence - oops. And the joke was in class she will come and ask the principal, and talk - have a talk with her. If there are ways that she could be helped. She even made an appointment with the high school principal to ask him if there is anything that could be done for her. You know that's how hurting it is. You know when someone even had this one from the district, had a talk with her - you know - to help this particular learner.</p>
I	So at - at least now you identified her - uh - strengths to say what is it that she's good at. Okay. That's - that's a wonderful experience.,
?	Ja and 12 years ago. Ja? Ja it's 12 years ago.
	(talking together) Ja.
I	Is there anyone who still wants to share experiences with us?
?	You know in - I - I went back to teach grade 4 now. Ne? And it's under GPLNS. Uh - you know I like the pro - programme but it's -
I2	What is GPLNS again?
?	Ah - Gauteng Primary Literacy Strategy.
I2	Okay.
?	<p>Mm. So it - it - it's - I might say it's a good programme but it's too tight. Really. Especially for - for our learners as we have more than 60% of learners experiencing learning barriers at our school. You know the - the - there are learners in the class that I teach English now in grade 4, you - you know - they are almost 12, the - the ones that I'm talking about, out of that learner - uh - 60 learner class. You know I think eight of them or - or nine, they don't have mothers. And those learners cannot read and cannot write. You know? That is painful also. You know some - uh - (crying) you - you know?</p> <p>Ja they - and - and - and if - moreover there are - oral - formal oral tasks that they need to do. That's where now you - you - you put the learner into a corner. Uh - but there are these two learners out of the, one is - is repeating grade 4 now. Ne? This learner was being - you know - comp - the - the - the teachers used to complain about last year, the boy. And it's - uh - he looked like he's a very hyperactive learner. But very neat and you know - to me he - he looks like the one that we were talking about. He knows what he wants in life. And very you know focused.</p>

	<p>But the problem is he cannot write. He cannot read. You know it could - and the spelling is very good and the books are very neat. So I implemented - and then - uh - there is this other one also who falls within those who don't have mothers. And she - she - she is always very - you know - uh - looks very angry in class. I don't know why - where the anger comes from. You know?</p> <p>And we - we - we started this programme. I - I did it with them. You know - in the - I joined them in the last term - the - the last part of term 1. Then we did - by the middle of term 2 this one, this boy, you know he - he showed me some light. You know? So the others you know there is no light that is showing. But this other one, the girl, now in the fourth term - you know, she is able to can read her - her exam scripts and be able to answer.</p> <p>She even gets - uh - more marks than the learners that when you came to say, these are the well performing learners. And we were doing this 25 mark oral reading to - you know I gave them to do pre - prior reading at home. Then they came, I just chose a - a - a page to say, read this one. Or maybe exchange books because they differ. I gave this one that and then I took this one's book and gave to that one, can you read for - for us. They did not prepare that one.</p> <p>You know this girl is so confident - you - you know she - she will take her time when she reads. And then somewhere you will see that she's missing a sound. And then she nods her head and then go on - to read. But this boy is more fluent than this girl. So those are some of the things that makes you - you know - go day after another t say at least we are getting there. You know?</p>
I	So have you considered using special concessions? For - for these learners? Ja because - uh - special concessions they now start from grade 1 actually. Depending on the difficulty of the learner. And I think you need to also look into - into it. If the - uh - they also help in making the learners to regain their confidence because now once they see their marks going up a little bit their confidence comes back. So but we - we will talk about it another time.
?	Ja. Okay.
I	Some other time, the special concession part. Okay. Uh - how do you use ICTs in your - or maybe this one, this question, must I leave it to Mr X?
I2	Uh - ja. Um ja. I'm very excited -

I	I'm - I'm - I'm enjoying to asking you these questions and then I'm forgetting that I've got a colleague who should also -
I2	Ja I'm very excited but I've learned a lot today and I can see that - um - I'm with experts.
	(laughter)
I2	That's it, yes, I'm - I'm telling the truth, I'm with experts. You know when I started teaching I started at high school. And I spent three years only and then from there I went to College. I worked at the College of Education. I've never worked at the - a the school. It was just only three years and from there I - since then I've been working at tertiary institutions. Um - and you know that's why I - I say I'm so excited about - uh - learning and from you experts. And people who are committed. You know - um - we know they - they say - um - when you are a teacher you are sacrificing because most of the time people will tell you that teachers don't get a salary they get peanuts. Ja. So we - we - uh - mostly it's commitment. You are not motivated by anything except commitment. Not salary but commitment.
I	And passion.
I2	And passion. Passion. Ja. Ja. I can - most of - or all of you, when you talk about experiences I can see smiles - smiles and it shows passion. Like - uh - Teacher D, she wanted to talk more and more about her successes on - ja. So - um - have you ever thought of using ICT in your lessons? ICT - you know when we talk about ICT we mean anything from radio, radio - uh - uh - tape recorder, CD player, anything - TV, uh - decoder - digital data project - ja. Anything, TV, computer, simple - even though - uh - most of the schools don't allow cellphones in class. But do you ever thought of using - how do you think you will be successful when you use ICTs in your class?
?	Uh - it's happening. Though it's very slow but you are getting there. Some other teachers are taking initiatives, the other - two weeks ago - because ... Afrikaans teacher was showing the last movies, the movie. And they used the laptop and the projector so it's happening. ... I use my cellphone (laughs) for dictionary. You know if - and because it has the pronunciation - you know? So if I come across - across a word and you know I will just do this quickly and get it. And say, listen, kids, listen and they get it. Ja. You know so I think it's high time that we - we - we - we use this. Ja it's high time. Because you know it makes - uh - lesson interesting. You know you can see the grade 7s when they were watching the movie, they even refused to get me some water.

	Because they were glued on the - on the - on - on - on the movie. So it's interesting. Ja it's high time that we - we do that. Though again again we do the - the mark sheet, we do the laptops, it's - it's cool. And it makes life easy. Mm.
I	Okay. So what you are saying is that you - you mainly use it for your administration purposes there, for planning.
?	Ja. For now it's still there. Ja. Ja. But I've seen others doing their - the movies so I can see that it's - you know - it's getting done a little bit. Ja.
I	Okay. Teacher A?
TA	<p>Although my support is mainly on supporting educator - educators in a rare occasion I will take those learners that are labelled as learners with behavioural problems, those learners they don't listen, they don't concentrate. Ne? I will take a radio that will narrate a story. They will be listening because this time it will be listening to a different - you know - situation. Not listening to a teacher. Listening to - to a device.</p> <p>So the - the - the - concentration it really change because they will focus on the device and try to get up everything that has been said. And afterwards I will switch it off and ask them questions - you know. What have you got ? What happened at the beginning of this? If it - if you - if I - John was you what will you do? You - so it helps - we only use radio - only tape record like - ja. Not yet. We are still coming to use these other devices. Like we have to use - to apply practice in our full service maybe next year.</p>
I2	Mm. Uh - uh - just - just to - just to - you know - I just want to say something there. What you are saying, you are saying - uh - you use radio only.
TA	Taping.
I2	Ja well tape. Ja. You know when I was doing - uh - uh - uh - when I was doing my first year in - in - in - uh - teaching, when I was training as a teacher we - we - we - I was doing also Practical English. It was compulsory,. And then we went to a language lab where we will also - uh - record ourselves, words - uh - it's nice. You know it will be like playing where you say - like - that word be-a-u-ti-ful. You ask them to - to pronounce those words. And then they listen to themselves and they realise that - oh I'm not - you know when you hear yourself you react differently.
TA	Ja.
I2	So those things - some - some - some of these things we do have them but we - ah - it's a - we do have the, but we - see - we - we - we think that they won't be useful in class. I think if we have a different view of like tape recorder. The old tape recorder would - would - would be very valuable in our class.

?	But again as much as we say we love these - uh - devices then you find that the problem will be - the laptop that I was talking about is mine. You know, you understand? It's not the school's. If there's a projector you find that it's only one. You understand? And I - a booking for Monday, finding that she also wants to use it so eventually hence the ICT thing in our schools, it's not - you know - as in - in theory. Ja. That's the problem because we don't have these facilities.
I	And do you have a computer lab? A one for Gauteng Online?
?	We don't. Unfortunately. Ja.
I	Okay. Right -
?	You see these are the challenges that we have, you know. Ja, that we would love to use these things, the technology, but the resources.
?	Okay. Like in foundation phase all the classes they have got tape recorders.
I	Wow. That's ...
I2	And you are using that? Okay.
?	Ja. When I was teaching grade 3 there were - there was this learning programme starting from 9 o'clock. By that time it's before the GPLM ... we were listening to those learning programmes.
I	On radio or on tape?
?	On radio. On radio. But now we are going to use them for visual arts. Because learners are - are supposed to - to do all the moves within those tape recorders. Ja. Because they have introduced these visual arts things in LO for foundation phase.
I	Okay. You are going to use music?
?	Ja. so that during - uh - physical education when they are doing visual arts they must listen to music and do all the moves, all exercises in their classes.
I	Okay. Teacher D?
TD	Uh - you know I think - um - you know we - we as educators it's - it's not that we don't want to use those devices. We - we think about them. But you know now in my experience is really the curriculum is too tight for our learners. You find that you have been given certain learning outcomes and assessment standards that you need to do per term. And if you end up the term - you know you have done a quarter - so when you are at school each and every day, yours is to get into class, you teach in terms of - you know, teaching the learner.

	We are not facilitating - you remember, my experience is when I teach for example Social Sciences. I teach my learners a language and the content. So for me to go to the I - IC - devices it's going to take my time. The minute I end up the term most of my work has not been done. So I want to use each and every period so that by the end of the term what X has prescribed for, I must have done it.
I	So how about the integration wherein you integrate your topics? With - with that?
TD	Like - like now I - I - like when I teach the learners there for the first term about the hunter-gatherers, you know I - I - I - wish I can hire some films to come and show them because there are films. But when I look at time and what I - when I look at the amount of work I - I say, let me teach. So you see now I am denying my - my - my learners to see - because some of them cannot go on - to - to movies to can go and watch them. Some will say to you, Ma'am, I went with my father to go and watch the hunter-gatherers movie at X. At Ster in - you know - X. Ja. Wherever. So I - I - I - I wish I can hire - hire them and play my DVDs. My - my learners those DVDs. But really in terms of the amount of work, uh-uh.
I	But do you think taking that time, trying to make them visualise what you are telling them, is taking even more time than when they just see it once and for all? For themselves? Because for you now, you have to tell them in a manner that they can see - visualise what you are saying. Like in a movie. But if they just see that movie now and then - now you - your duty will be to talk about what they saw. Not to try to make them see it with - uh - with -
I2	Imagination.
I	- with an - ja - imaginative -
TD	Ja. You - you know, maybe it - it's a matter of - you know - looking at time and - you know to - to collect all the material that I'm going to use. You know, the DVD player, there's the ... That's why I'm saying really, our curriculum is too tight for our learners. According to me. Because if you are not finished they ask you, how far are you in terms of your - your term planning? And when you write 40% and in you are in - like now in November, It's as if you were playing or you are not doing your work. So you - somewhere somehow we are not doing justice to our learners in terms of -
I	So it means you - you have a fear to say, if I use so many resources they will take up my time.
TD	Not necessarily as here but - uh - I'm - I'm going to - to rob my learners of some of the content that I need to teach them.
I	Okay.

?	To add, let me - uh - ja. I just want to add like what I said earlier, ne? I said lack of resources. Teach D just said, you know, going to organise them, you know, from the office to - you see that's where the problem is. But if we have them then it will be much easier.
I	I get your point. Teacher B and Teacher E?
?	And another thing that we are using for this - uh - technology devices, we are using pictures so that we can just work on time, the given time that we are - we are given. The work that we have to do in such a period. We are just using pictures. Because learners can learn s - just seeing things on the picture. Mm. Because some of the - some of them, even if when maybe you use TV so that they watch something there, they just watch for the sake of watching. When you have to ask them questions they don't answer because they were - you know, some are playing and doing all those things. You see?
I	Okay.
I2	It was just for -
?	And then another thing - yeah, entertainment, you see.
I	Teacher E? You've been so quiet.
TE	Well in foundation phase when we use our - um - tape recorders you - we sometimes use them for the rhymes. The learners listen to the rhymes like, Old Macdonald had a farm, e-i-e-i-o. And they sing along with the tape recorder. (laughs)
?	It's learning.
TE	Ja. It's learning. Ja.
I	But is it helping?
TE	Ja it is helping. The - the children they really like it. Ja.
?	And .. it will happen that your they will get on tune with that.
I2	Okay. So have you thought of maybe - uh - uh - suggesting to the principal maybe to have - maybe - um - have some time, maybe on Fridays you knock off earlier and once in a while you show them films. Like you know where - especially we talked about behavioural problems, where in a certain school children who are misbehaving and ultimately some teacher like you came and changed their ways. Don't you think you can do it - something different or some difference?
TE	Uh -
I2	Using projector and laptop. Sometimes - well, we are sacrificing many teachers.

?	<p>It's a challenge to - like in our school is that we don't have a hall. So already it's a challenge. Even when Teacher A may come up with something, you know it will be a challenge. You know if we had an extra ... all classes are occupied. So it's another challenge. So if I have something then I have to use it during my own teaching time. You see. So that's where the challenge is and then if maybe it's a movie then you see they'll go what Teacher D said. Then it means my less - lesson - lesson plans won't be followed. That's going to be chaotic.</p>
?	<p>Again I still want to - uh - uh - maybe try to emphasise, I don't know where the - the interview is taking - will be taking ... said here to which level. But I I hope we are not just you know being interviewed. You know the - the - the - there must be some fruit that is going to come out. Really time - when - for example for X, I don't think X is being only black - uh - township schools. I think the - the - the - the - the suburban schools are there.</p> <p>But as I have said, you know, suburban schools are teaching more of content. If maybe they are teaching content then maybe it's language. It will be 98 content and 2 language. Uh - if I give my - an example of Social Sciences. But when now I teach Social Sciences I teach 40 Social Sciences content and 60 language. That's where the difference comes. So at the end of the term now I might be there and the suburban school, grade 5 Social Science teacher is here.</p> <p>Because he - you know, it has been designed as if you come into class and you teach and teach and the learners you know they - you know? Can't - we are coming through challenges where we are unable to can - you know - some - being unable to use some devices.</p>
I	<p>No, you - you are very right because like you said, in terms of resources, the schools are different. Like the schools that you are talking about, you find that they have got centres, like they've got the reading centre. You now as a - as a teacher who is teaching Social Sciences, you are also supposed to make sure that you also support these learners in terms of language. But now in those schools they've got specific teachers for specific kind of support.</p> <p>They do have math lab where learners with maths problems they go there. Learners with reading problems they've got a reading centre as a specific period. And then they have all these resources wherein when you are a Social Science teacher, when you get into your class there is a DVD player there, there is everything. So you are able to show them whatever movie. At the same time you talk about them, there are computers there. Now they can go and search on the internet something that you don't have. So we - we</p>

	<p>cannot even start to make comparisons.</p> <p>But what we can do is - what best can we do at the moment with what we are having? Because it doesn't help to compare ourselves to say - they - they - them and us. Them and us. It's better for us now to say, what are we having now at the moment? And then what best can we work with that?</p>
?	<p>Uh - and as you are saying only to that, ne? We are trying. As X said, it's - it's - we are trying always to introduce it. You - you find that we give them the ... project and you tell them to go and Google. And you know in a class of 46 you will find that - uh - 35 will come with the work. Parents do - they do their work you know, When you give them a project then you will give them 7 days or 6 days to - to - to do it. So those whose parents have access at workplace they do that for - and the learners then will compile. You know?</p> <p>Uh - others can - then on Monday they will say, Ma'am, I - I will go to the internet cafe. So you can see that you know our kids - you know - are willing and they are actually - these are the children of technology. Ja. These are the children of technology. And they love it because if you say, you go and Google, okay, you see them nod. Ja. Ja. Just the unfortunate part will be those who are - the one who is late, whose parents are not working ... So you see that's a challenge. Not only of accessing but also the money to go to the internet cafe.</p>
I	Okay.
?	Ja I'd like to go back to the question asked to say, can't the school organise movies? We used to do that in the past when we were still ... We were using F5 classroom, it's bigger. But we could see that it's not working well. So we don't have a hall. Ja.
I	Okay. So maybe to - before we wrap up, because we exhausted our questions, I can - I just want us to come back again to the reading difficulties to say, the experiences that now you - you are saying about the ICTs, how do you see yourself using them to support those learners with reading difficulties? Why - uh - what - how do you see them supporting - how do you see the ICTs supporting those learners that are experiencing reading difficulties? Even if at the moment you are not doing that but how do you see it in future? To say, how best can they be used to support our learners with reading difficulties? Teacher C?
TC	Ja - uh - sometime back last year we attended a workshop at X. There were those - uh - learning aids, those resources, TVs and the learning aids, how to use them. We even went to Johannesburg to see them, display them and how to use them in foundation phase. So if the school can purchase that for the foundation phase I think there are very

	good programmes that we have seen.
I	Mm. What - what - maybe to share with us a little bit, what exactly the programmes are doing.
TC	Uh - they have got - uh - maths and English.
I	Okay.
TC	Ja. teaching the learners maths and English, basics, starts with the basics and so forth. Ja. They are selling them to schools. Ja. We went to attend a workshop where - you know - there were ten schools that - if they have got money we can purchase those programmes. They are very good programmes. a.
I2	Haven't you thought of getting a sponsorship? Asking maybe - uh - oh - Pick 'n Pay to buy you one of those products? Write a letter and say, you know, ... teachers, I know ... how to use it - how you - how to use certain equipment but unfortunately we don't have money to buy that. Can you please buy them for us to use in our classrooms? Many schools are successful with doing that. And especially white schools, they - most of - mostly they - they do that. They ask for sponsorship. Even - uh - lot - they do write. So that sometimes we - we forget to do that. But if we can try - start doing that maybe, slowly and surely you can accumulate some of those ICT programmes. And - uh - devices and resources.
?	Noted. I said noted.
I	Teacher A?
TA	(clears throat) Um - in our supermarkets there are those devices that are used by learners of foundation phase ages. It's the games, spelling games where that device will - you know it - it will show a picture and then it also sounds the - the - the - the spelling of the picture and allows the learner again to remove that picture and the learner to come up with the - all the single letters needed in that letter. You know it assists the - the learners of correcting their spelling. Ja if in future we can get such devices in our school to do spelling check. Then it will help.
I	Okay. ... others? How do you see the ICTs helping you in addressing reading difficulties?
?	Uh - they'll they will have - (background noise)
?	The sounding of words. The pronunciation of words. Then the learners can be able to listen to what maybe the person will be saying. And maybe in the radio. Then the

	learner can be able to utter those words and then hear the - the way they say them. It - it could help.
I	Teacher D?
TD	<p>You know I - I - I think you know if maybe we can have - even though I don't have experience of that but I - I just - you know - visualise it to say, if we can have a computer lab where maybe there are programmes where learners can be hands-on on the computer. And maybe like they - they spell and at the same time they sound the word for example, second.</p> <p>The learner is, you know, listening to how to spell it, maybe say suh eh and then at the same time it's written on the screen. You know maybe things like - where they - they hear and see. You know and they do. You know I think those programmes can help our learners.</p>
I	Okay. teachers. We're coming to the end of this interview and I would like to thank you very much. This information is very rich and I hope it also opens the eyes of some of you because - uh - even though you are working at the same school but you don't experience the same things at the same time. And I really thank for you for availing yourselves, for taking your time and coming to share with me these questions. If there is anything that you want to say or you want to ask, you are welcome to do so. From my side the questions are - are done and I thank you very much.
	(end of recording)

APPENDIX I: Observation transcripts

	Transcription
I	My name is X. I'm at one of the schools in Tshwane South district. I'm here to observe how learners with reading difficulties are supported.
P	Tall children sit at the back and the shorter sit at the front, sit on a little chair there. Okay. It's okay. I will - I will take the chair there because I don't want you to - be careful of the wires, ne.
I	Ma'am is that a communicative whiteboard?
P	Yes.
I	Okay.

P	Yes we use the ... on it and I also need the internet but this morning the ... just read this tray. I - one of the children - if they kick that wire it goes off so they must install it permanently.
I	Okay. This even?
P	Ja.
I	And then how does it- it - it help?
P	You will see now.
I	Okay.
P	It's - uh - you know we get a bigger image of the programme I'm using, the programme I'm using is stafel.com. It's a UK programme. Because I - and it's a progressive programme. It goes progressively.
I	Okay. Do you - do you buy it or do you just access it from the internet?
P	This - this one is mahala. You can buy extra software. And I asked - I - uh - budgeted for extra software. Okay.
I	Okay. And the extra software they give you the licence.
P	Ja. you get about - uh - I can only - you know I can buy it for one class then the money is less than when you buy it for the school for instance. If I just take it for personal use it will be \$30.00 a year otherwise it will be about \$60. The - this setup here.
I	Okay.
P	Right. What's that?
C	Eh, ee.
P	Ah. What's this?
C	Eh. ee, oh, ah.
P	Okay, what do we call these?
C	Vowels.
P	Why do we call them vowels?
C	Got the ... sounds. Sounds.
P	Where? Where? We need them and if we take here we see they make the most sounds here. The others also make a sound. But the five vowels are the most important and we are done now with the five short vowels. We are now doing the five long vowels. And

	that's what we're busy doing in peace ship ma'am. Year. Okay.
I	So the - the peace ship is the story?
P	They a reading book with it. We may print that, you see. I just want to see if the TV is on. I think so. Why are you late love?
I	And then from which grades are all of them?
P	Grade 1 - I - I get grade 2 and 3 and 4 in this - currently. These are all in one class. They are in grade 3. I take class by class otherwise in the foundation phase it would be very difficult if you take one child per class over six period or ten, twelve periods per day. So I take them all together so that they can -
I	Okay. So they are just a specific group from the class.
P	Ja. Ja. No I identify them. I use - um - ... spelling test at the beginning of the year. You get it on the internet as well as Bird's Reading Test to - us - get their reading and spelling ages. And I take many of these - X, what are the rules? Uh - many of the children are refugees that we have here. So I take them with - you can't get a reading age because obviously - then we teach them. I start by teaching them the sound system. But that's not mine.
I	And you also have a programme, another programme for that?
P	Um - I use mainly Microsoft - uh - templates for that. That I also project on the board. Because it's - it's nice for them to see. Okay let me see -
I	Okay. Do - do they get to maybe touch and do ...?
P	Uh - the .. is now disabled. I don't know. One of the children did something. I thought I would - you know if they touch the wire I have to re-install. So it's - because I really want you to see how it works. They will come and they will drag it with a pen you know.
I	Oh alright.
P	Uh - this - this pen. They click on it and they drag it so it's an interactive tool. All learn how.
I	Wow.
P	(ongoing computer voice and noise)
I	And it's also talking to them.
P	And they do it - uh - usually but now I know you don't have time. Or the ... probably. And this is X.

C
P	Make it long. Seeeeed. That's it. Now remember we are now busy with two vowels so you take your time to read the word and I want to hear that long eeee. I don't want to hear sied. Huh? Uh X.
C peel seed.
P	Good. Okay. Uh - X.
C seed eel peel.
P	Good. X.
C	... seed peel eel.
P	Uh X who is sitting here at the back? X. Sorry X.
C	... seed.
P	Who is talking? X? You can't talk when she's reading. We don't allow that.
C	...
P	There we have it. Good. Okay let's look now. These words end on what? Ink. All of the same word family -
	(computer voice)
P	Okay look at me. Give me a wink. Give me a wink. Let me see. Wink all of you give me a wink. Quickly. Wink with one eye - other eye - one eye - other eye. Again. Switch switch. Okay. We wink. Right. Wink.
	(computer)
P	Before we do that one tell me who likes pink? Who likes pink? Why do you like pink?
C	Because it ...
P	Do you like pink?
C	No.
P	Why not?
C	Because it's girly.
P	You think pink is for girls only?
C	Yes.

P	But a boy - the boys are wearing pink now. You can also wear pink.
C	No.
P	Don't you like pink? X no pink?
C	Me not that much. I don't like pink at all.
P	Oh okay. That's your choice if you don't like pink, fine.
I	What is pink?
C	It's a colour.
I	Okay. (laughs)
P	Ah ja.
	(computer)
P	You see it can do all this .. there ne?
I	Ja. Ja this is very ...
P	Where will I get the sink?
C	At the ... at the bathroom.
P	In the bathroom.
C	In the kitchen.
P	In the kitchen we get that other one huh. A big one to wash my .. Can I wash my - my face in the kitchen sink?
C	No.
P	Why not?
C	... sink.
P	In a basin. We can that sink a basin too ne? A sink I also called a basin. Right. Let's look at that one. How can we drink? Okay. Well done. Right. Now we're going to see - who's she?
C	Sheets.
P	She -
	(talking together with computer noise)

P	Peace sheep. Um - this is just ... they've got a name for it (laughs) but I don't know. Let me just see. Um - if those were the only then you can't work the ...
I	Alright. And you - you don't - you don't necessarily need a board. You just put on the wall.
P	We project on the wall but I would prefer a board because - um - the beam is in there. And then it can suck onto the wall. Now it's - there with Prestik and when the wind blows it falls off. And it's very ... sensitive. So you know but you can write on the board if you have ... You can - ah, there we have some access to. Okay. Let's check there. Okay. I'm going to make a picture there. Unfortunately you can't write with a pen. Let me first come to it. You tell me when I'm done. What do you think this is?
C	It's a bed.
P	Ah and what's that?
C	A ball.
P	A ball. Now I'm - they're going to write with this pen on ... we don't have access now. We have - uh - something. I calibrate that board usually and I just - you see then they can - uh - do that for me. We can change the colours. Uh - of the handwriting. And that's very very good for the children because - uh - they do - most of their things are more visual today. So if you change colours what you do, if one of them writes a B - a buh - I take another ...
I	Okay.
P	And then - uh - to see if they have shaped it correctly we undo. If there's anything left they didn't do it right. You see. You can see how many steps it took them to do it.
I	Yes.
P	You do different colours, you have a - a keyboard here. You can - uh - use the keyboard - um - enable that. There's the text and then -
I	And then they type.
P	They can type words like -
I	So when they type do they still use the pen or -
P	No. Ja they use the pen then.
I	Okay.
P	On that. Uh - if they use the pen you can also enhance that image there. Um - ja you've got - you can directly go to classrooms, oversee action on the internet. If you want to teach them some more stuff. And what's nice, we have a nice - on this - uh - ... we

	have a nice handwriting school - handwriting. See? All the letters are shaped perfectly for school. Um - you can also highlight it. Um - you can - ja, there's a magnifier.
I	Mm. Okay. For - for those learners with ... problems.
P	Ja but you know what - um - I find now that we must go smaller. Uh - we must get that image lower. When they come to put it in permanently the - uh -
I	Okay. It must go down.
P	The projector will be there but it must go down because it must be on their eye level. Always on their eye level if they are small. The smaller they are the better. You know always try to look at ...
I	Okay.
P	Okay. Uh - I'm going to ask one of you to read now. Okay the -
C (sirens)
P	Do you hear that? It's getting worse.
I	So now how - how do you usually cope with that noise outside?
P	If you close those windows you get far less noise so they will have to install like a - I would have liked it if they could have built that window - if they could have closed totally. And put a - something like an ... because - uh - this stuff is always better if we tend to you can't - they don't like it if you - uh - change ...
I	Alright.
P	Okay.
C	...
I	Oh there's no way you can maybe change a classroom to that side?
P	There's no classes available. And this one side, the noise there is just -
I	(laughs)
C	...
P	Okay now I just want you to see this.
C	...
P	Says. It - it looks like says but it - it say - says ses. It says ses. It makes ses.
C	...

P	If you teach a child reading, especially if it - they have problems, you must use - this is very good to highlight it. But you will know that. And they point with the finger.
I	Okay.
C	...
P	And what is he dreaming of?
C	Sheep.
P	Sheep. He's dreaming of nice sheep. Okay. Uh - I'll just show you some of the things that I myself use and that I developed. Uh - okay let me just take anything. Okay, that's long and short words. It's just for them - it;s like your old flash cards but now you put it on the screen.
I	And then what is the programme that you use to do those flash cards?
P	Uh usually Microsoft Word and I take their pictures or - uh - images from them. They have an online ... so that's what - and - and -
I	And - and when - when they are - wrongly pronounce they also -
P	Uh-uh. No, not - I'm not that far developed yet. This is merely to give them practice because if they don't hear they must have it here, they must have it here, they must have it - they must hear you say it. And if they don't have the right pronunciation they don't say ... they can never pronounce it correctly. Okay what's that?
C	...
P	And I do a ... - uh - with individuals.
C	...
P	Okay. Uh - X.
C	She - sheep.
P	Good. Ja you see why that one is long ne? X. Uh-uh.
C	...
P	Shoe. There's no S on there's no sss.
C	Shower.
P	Shower. That's it.
I	So sometimes when they see the picture they think - they -

P	That's the idea. When you go back - I go - like - uh - go up there, they don't always see the picture. But now - okay. X.
C	...
P	And now that one sounded just like that one. X what was wrong?
C	Sheep.
P	And she comes from Eritrea. And she picked up the language, she's going to pass this year so I'm quite happy with her because it takes them two years to pick up a new language. And especially these children - uh - it's - it's terrible for them to be - uh - taught in another language. Some of them were - like X was in - uh - Tswana school until the end of last year. He's now in grade 3. So for two years mother language, now English.
I	Ah.
P	And you know the end - uh - what we do then is - um -
I	Do the parents ... extra money for ...
P	This is part of the school. I'm paid by the GEE and the principal puts me in. But you know what? Next year we hope that ... action will give us ten computers in this room and then we can put ten children in. Not like this - it's - this is necessary because ... all - always there. But then if they put them - if we can have extra computers, if one has completed the work you can always - uh - take the other one. I will show you what else - okay, children, come line up. Go back to your class. I just want to show Ma'am - line up nicely. When you go down, what do you do when you go down?
C	Sh.
P	And what don't you do? X? X? I can see through the window, I'm going to check you, huh? Goodbye ... Say goodbye Ma'am.
C	Goodbye.
P	See you next - when this - tomorrow. Do I see you tomorrow?
C	No. Friday.
P	Friday. I see you Friday. Ja, Friday. I'll see you Friday. You can go.
I	Wow.
P	Is it your birthday?
I	Are you going to bring a cake?

P	Ooh she's going to wear home clothes. X?
C	... before last week.
I	Why didn't you bring the cake?
C	Because my mother didn't work on Friday.
I	Okay.
P	Okay you can ... Okay. ... Ja. No. If - this is what I developed. I had a - a - I have a - a website under construction, educational help. Uh - progressivelyclever.com but I'm going to change the name. And this is just - I made a lot so that they - uh - had a - a lot of exercise in putting words in alphabetical order. Here.
I	This is very nice.
P	Uh - it's - ja. You know what - uh - it's in connection with - uh - what they do there. They get practice. Ja. Otherwise it doesn't mean - as you know it doesn't mean ... and I also give them dictation. At the end of - those - it's wonderful because you must really see the stuff the they have on - just sit down there children on stafel. Um - I prefer it by far because they get the English from the mouth of an English ... Now I just want to take you to the main menu. Ooh. Uh - this - if you can just - they can subscribe all the schools to this. We will have something wonderful. You just don't know. And we do this - uh - I don't always - this was very - in Afrikaans we will say flou.
I	Yes.
P	(laughs) sommer 'n gemors. Okay. Now I go there. They get things that they can listen and - like a little story. The other day I did penguin penguin with them. They can read it on their own if we have - separate computers for each one. And then if they can't read see what happens. They click on the ... (computer voice)
I	It reads back to them.
P	And then it's the whole story of the father - uh - penguin who is hatching the egg. And here when you go afterwards this is wonderful. Now I wish to put in my website as well.
I	Now it is the puzzle.
P	Now they must - this is sentence construction. We get it that these children who come from the township school and from the refugees. This is now English. And the construction is very difficult. And it's easy for them, now they - they learn there's a capital letter so I have to watch. Even if I don't know what the word means and they must look at the shape.
I	Yes. (computer voice) And it also teaches them mouse skills, how to click, drag and

	drop.
P	Ja. Uh - look there. And they do it with a pen as well. They do it there with a pen usually. And there;s a whole story and you will go down and so on. But - um - this is also important if you teach reading to match words to shapes. Let me just go - which one. You will see they have a lot of different things. Uh - you can go in to this website whenever you want.
I	What is the name of the website again?
P	Stafel.com. There's the name. You see stafel.
I	Ja.
P	And there -
I	And - and now it's - it's a book. It - it really looks like a book and it -
P	And they know it's three, four, they have to page -
I	On the - on the board.
P	They - they learn to look at the arrows. They - they get direction. Those with - uh - laterality problems -
I	And I like the fact that it also shows the pages. Now they know I'm on page 7. On pae 8.
P	Ja. I can go back and they have to cross their midline. Because we have a lot of children, you won't believe it, who can't cross their midlines. Many many of them have - have laterality problems. Okay. That's - and you know what, that's education. That's really - it's - it's lovely.
I	This is lovely.
P	Um - we have three little plays as well. And then I let one of them read the one part and the other one, like dog and cat. One reads dog, one reads cat.
I	Okay. It's like a conversation.
P	Ja. Ja. And you know that - it saves you a lot of work, you don't have to do it. You can - sometimes you just let them put on a mask to change the - uh - atmosphere. Because they like that but I have them only for half an hour at a time and if you did this, this is utterly important. For them to see. The - most of them write the p on top of the line -
I	And they also have to count how many blocks does - does - does - uh - I have to put that way because it's - it's - it's four letters, I must put it on the 4 block.
P	Ja. Uh - they - mostly they guess but it helps them help to guess in any case, ja. It

	shows - and it's also going - that - this is your - uh - more simple stuff. Now I'll show you the extra stuff that you have to pay on, they give you a sample on it. You can do the short A on that for mahala. There's - there's extra stafel. Stafel - more stafel.
I	Mm.
P	It's really amazing. You -
I	Okay.. You've just got ...
P	This is now - ja. This is now - uh - just their sample. Ja. This is their sample of the eh. You get the same for - for uh and of all the other vowels.
I	Okay. This is really amazing.
P	You see there - that's what you have to buy. (laughs)
I	Oh down there you have to buy.
P	Ja. From E on you have to buy.
I	Very good. Then these ones are grade 4s.
P	No, still grade 3s.
I	They look big.
P	Mrs X. Ja, they're going on grade 4s. And this is just again to reinforce known knowledge. You see there you have the same - Sometimes they have a single letter, sometimes they have the whole word ...
I	Okay. This is very nice because it's - it's interacting with them.
P	And they're doing -
I	They see the pictures -
P	And they
I	They hear the pronunciation -
P	And they must write ...
I	And they also write the words. This is marvellous.
P	And I'm very chuffed with this. Really there's a teacher's lounge, - uh - there's a stafel - you - this is a kindergarten curriculum because we can't - you must start from scratch. These are all children who have a - some or other problem in class. Uh - many BDP confusions we have. Really you can't look at their curriculum. And if I do it with a - the pen on the eboard they take the pen, I draw a line and I tell them, okay, make a

	buh. Then they have to put it on the line. And they will do that and everyone gets an - a chance or I do all the letters that have got tails. It's so easy to tell them, the tail of that letter, where is it. This is -
I	And they do it with a different colour.
P	This is the tail.
I	Wow.
P	If I say, that letter crosses the line, where is the cross? There's the cross. I show them.
I	They also colour the -
P	They know that's a cross. Then there's the cross. And then which are the other ones that crosses the line? Then they must do that for me. There are only five. So they do writing on this and it's wonderful, like I've told you. Now you can see, they know how to shape that letter. Because if they don't start at the right places, your B starts there first and your D starts there. They get confused.
I	Ja. Mm.
P	We know that. And they have to go back. They never realised that they have to go back on the same line, then we just take another colour and do that part. And they love it. They are so ... ja it's very enjoyable for them and - and me too, to see them opening up. And - um - some of my worksheets I develop them just to build - um - communication or vocabulary. Um - I think I must just show you on my other computer, it's more easy there, in the other room. If you don't mind.
I	No, I don't. Not at all.
P	What I use - oops. Sorry. Come. Good morning.
C	Good morning.
P	This looks very ... You may take a book and you just go sit two - two at a table. You read to your friend.
I	Books to read.
P	Ja. I - I - I myself buy a lot of books. You can see here. There are some of the school's stuff but I like to work in levels. I want to tell him -
I	Okay this is a set.
P	You get it at Pick 'n Pay. This level 3, it's already too difficult for most of them. But then I teach them to - uh - read the longer words, ... you know, make it in - in smaller parts of three and fours. And - um - yeah, they can read level 2. Okay, you are in grade 2. You know. That kind of stuff. While you are in grade 3. and they are

	different colours ... Not so - uh - good . You always have to do some - uh -
I	And then how many levels are there? Four?
P	Pardon?
I	There are four levels?
P	There are about five levels. Or six, I can't -
I	So it means when - when the child is at the last level, now he or she can read fluently and with understanding?
P	Ja.
I	Okay.
P	But I only - I'm telling you, when I go through the work with them, I get them at the end of grade 2 level here. Then I'm happy. Because I make them ready for grade 3. And here I bought this ... that was wonderful. When I was in England they have ... For one pound, all of them. Because sometimes I will read a story to them.
I	Mm. And did you go there for training or -
P	No, no. I went to visit my daughter.
I	Okay. That's nice. In England is - is - is there - the people there are a reading nation, I know.
P	(laughs) It's so wonderful and they love it. And then we have - ja. I - uh - went and I paid membership to this Enchanted Learning -
I	Dot com.
P	Ja, here we have a whole dictionary with pictures that they can use -
I	Wow. So they also give - gave you a soft copy?
P	Ja. I could have - uh - offloaded for one year you pay about 30 dollars.
I	Okay.
P	And - but you know what? Good for once but many of the worksheets and stuff are so boring. They are all the same, they just change something small. Or a letter or so. But they have a lot of other stuff here and I like a riddle. You know it explains the word to you.
I	Okay.
P	Now children like that X who was here, you can trust him with this. And - uh - then

	we have the other picture dictionaries like this one. This is important in the foundation phase.
I	Ja, the picture dictionary.
P	Definitely. Because we teach them in English these children have not been taught in English before, most of them. They must see the picture to know the meaning. Later on I - I will show you, I - uh - then give them words without pictures. ... Okay. Uh-uh. Good morning ma'am.
C	Good morning ma'am.
I	My name - boys and girls -
P	No more bad manners.
C	Sorry ma'am.
I	So but Ma'am said you read to your friend but all of you have got books. Isn't it the person you are reading to must not have a book?
P	Two - two take the book and then one reads one page to that one and then the other one reads her page.
C	(children talk together)
P	Okay. And now we are quiet.
C	This is an
P	I - uh - use a stick there because that's not my computer - that was another person's computer.
I	The - the one - the - the one with - with the board?
P	With that board. I count three and then I don't want to hear anybody talking, only reading. One. Two. Three. And now the talking stops but the reading can go on. I don't know what's going on with out light today. Yesterday was no nice, everything worked fine. But -
I	It's very slow.
P	You will see -
I	Oh spelling sound patterns. This is good.
P	The one who - who gets this computer, if I have to take everything off one day -
I	Mm. So do you have a backup for all your stuff?

P	Ja. Ja, no, I - and I will leave it here because I - I'm - it - uh - can now tell you - okay, there's our first one. Sometimes I try to speak - uh - Tswana or Pedi and they tell me (laughs) and if I write it there they like that - because -
I	Ja, Setswana, Bolo -
P	Ja. Bolo, Bolo I know. Ooh, ja.
I	(laughs)
P	Ja. And they laugh of course because my pronunciation is terrible. Okay. Then this is now just the sounds. We start - I start by teaching them the sounds. Because if don't know a letter sound, ef makes ff. Eh makes a. And now that they have mastered up to uh I go - the - with the magic E, the silent E here makes a. Say A. Makes eh say ee and so on. Okay, that's one of them. And I can - I'll just - uh - randomly show you something. And this is nice with a pen. You can just go down down down down.
I	Mm. And the pictures also -
P	Ja it shows them. Ja I have another picture for hate, a little baby boy standing - and they love that, they say, oh, he hates this world. Um now - kate, late - Nate is a name and you know you ask them why is it written with a capital - in a capital letter. Because it's the name of a person. Late. Okay, do explain the words as far as you go. Uh - and then you use them in a sentence. What date today and so forth.
I	Mm. this is very good. And they get used to the icons. For example I can see where you asked about the date there is a picture of a calendar and the very same icon is used al - also on the cellphones.
P	Ja. Ja you will see there's a lot - A-L-L makes - and they also get - uh - used to the other way of - the - eh. In print. Because we don't write it like that. And it's good. They must - (end of recording)

APPENDIX J: Matrix

Combination Matrix	Total s	FG 2	FG 1	Ind 1	Ind 2	Ind 3
Challenges						
Access to resources slows the teaching process down	6	6				
Adaption to mainstream	1					1
Can analyse but they can't put it back together	1					1
Children from rural or township areas	1					1
Taught in home language	1		1			
Uneducated or less educated	6		1			5
Children with no parents	1	1				
Emotional problems	3	1				2
Class size not conducive to immediate support	5		3	2		
Communication from previous teachers	1	1				
Connecting visual with auditory	2		2			
Curriculum is too tight for our learners	4	3				1
Difference in learning and teaching between township school and suburban	2	2				
Individual attention - everybody stops working	1		1			
Knowledge on how to use ICT's	2			2		
Lack of available ICT's	6	6				
Lack of psychologist at school	1					1
Language barriers	3		2		1	
Children from rural areas	1				1	
English not the first language	1			1		
Foreign languages	5	1	2			2
Other official South-African languages	4		2			2
Teaching language is not mother tongue	1				1	
Language used on cell phones	2				2	
Late identification	3			3		
Limited vocabulary	10		4	2		4
Multi-faceted challenges	8	1	3	1	2	1
Neglect	1			1		
No formal remedial class in senior phase	2	2				
Parental involvement and support	5		2			3
Passive viewing to learning viewing	2	1	1			
Phonetics	10	2	3		3	2
Placing to mainstream unsuccessful	1					1
Psycho-social problems	1			1		
Reading matter are not differentiated	2			2		
Resources	1			1		
Rudeness towards students who struggle	4		2			2
School does not have hall	2	2				
Teachers feel constrained or helpless	5	4	1			
Feelings of helplessness	4		2			2

		1	1			
Space constraints	2					
The need is too big, too many children	2					2
Time constraints	12	5	2	1		4
Think in their own language	1		1			
Training support for teachers on ICT's	1				1	
Transport to extra classes	1			1		
Understanding	7		2	2		3
Dealing with reading needs						
Classroom observation	1			1		
Combining perceptual, visual and auditory	3	1	2			
Develop strategy to bridge problem area	5	5				
Group according to abilities	4	2	1			1
Group reading	1					1
Identify children with problems	9	6	1	1	1	
Identify the problem	1					1
Individual attention	15	3	6	1	2	3
Pair reading	1					1
Refer to social worker	1					1
Referral to educational psychologist	3					3
Referral for remedial	3	1	2			
Referral to professional for testing	1		1			

Skill development	2	1	1			
Communication skills	2		2			
Context translation and understanding	3	2	1			
Holding a pencil	1	1				
Listening skills	2				2	
Syllabification skills	1	1				
Word attack skills	1	1				
Slow working pace	1		1			
Support teachers to support learners	1			1		
Use ICT to move focus from teacher to device	2	2				
Vocabulary enhancement	2					2
Exposure to new words	4	3	1			
Start with spelling to build vocabulary	1		1			
Needs analysis						
Assessment forms to indicate barrier	2				2	
Auditory exercises	1					1
Comprehension testing	1			1		
Differentiate between visual and auditory learner	1			1		
Phonemic awareness	1				1	
Proofreading	1		1			
Scholastic assessment	1				1	
Test what they know	2					2
Testing at beginning of the year	2		2			
Chanel and Bert reading test	3		2			1
Indication of reading ability	2		2			
UCT spelling test	1		1			
Verbal testing	1	1				
Writing test	1	1				
Solutions						
Combination of teacher, parent and doctor support	4					4
Develop self-confidance and self-esteem	3	1	1			1
Early identification	1					1
Interactive learning programs	4	2				2
Let the learner choose the reading material	1			1		
Masks and puppets let them talk freely	1					1
Parent liason	2	2				
Practice makes better	2		2			
Proper communication with parents	1					1
Read the alphabet phonetically	1				1	
Remedial for language barriers	3		3			
Rewards and awards for good work	2					2
Start with teaching language in first three years	1					1
Start with the basics of picture and sounds	13	5			5	3
Support must be contextual	1			1		
Teacher tip evenings	2					2
Technology assists in development	4	1			1	2
Use current material to create reading interest	3			2	1	
Vocabulary enhancement	2					2
Exposure to new words	5	3	2			
Start with spelling to build vocabulary	1		1			

Successes						
Back to mainstream	4		2			2
Children being able to learn after being supported	1				1	
Children being able to write	1				1	
Children enjoy the class and want to be there	2		2			
Children keep coming back for more	2					2
Commitment from students	2	2				
Creating informal remedial programs	3	3				
Improved comprehension	2				2	
Increased vocabulary	4				4	
Learners excelling in other language	1			1		
Parental support	4	4				
Parents act as interpreters	1	1				
Parents realise you want to help their children	2					2
Reading and technology skill improvement	1				1	
Relationship of trust	2		1			1
Seeing children advance or progress	12	4	5			3
Seeing the children receive performance awards	1					1
Seeing the fruits of your work	2					2
Students being proud of being taught by you as teacher	3	3				
Students duplicating your teaching methods	2	2				
Teaching a Downs Syndrome child to read	1		1			
Thankful parents	2		2			
Thankful students	6	4	2			
To see a child being able to read	4	3			1	
Translate to their home language to understand meaning	2				2	
Use ICT to move focus from teacher to device	2	2				
Support mechanisms						
Allowing self correction	2		2			
Assistance from other learners	1		1			
Body use to form letters	2	2				
Colour	2					2
Comic books	1			1		
Compile your own dictionary	1	1				
Computer based extra reading classes	1			1		
Different colours of paper	1		1			
Differentiated reading matter	2				2	0
Flash cards	5				2	3
ICT's						
Cell phone	1	1				
E-beam	2					2
Interactive whiteboard	4		2	1		1
Internet	3					3
Laptop or computer	11	3	1	3	1	3
Overhead projector	4	1	2		1	
Radio	7	3	2		2	
Tape recorders	3	1	2			
Television	3		2		1	
Interactive drawings	5					5
Interactive plays	1					1

Labeling items in classroom	3				3	
Learning programs on radio	1	1				
Let them be story characters	2				2	
Letter sound association	1	1				
Magazines and newspapers	1	1				
Masks	1					1
Movies that engage	3	3				
Music to enhance phonics and vocabulary	2		2			
Pace according to function ability	1		1			
Pair reading strong with weaker readers	1		1			
Parental support	5				1	4
Parents act as interpreters	1	1				
Pencil and colouring pens	1					1
Pictures	5	1				4
Picture and sound	1		1			
Picture to letter link	1					1
Picture word association	3	1				2
Pictures with reading	10				10	
Powepoint presentations	2					2
Psychologist report	2					2
Puppets	1					1
Read the alphabet phonetically	5	4			1	
Reading centre	1					1
Reading corner	1				1	
Reading homework	1				1	
Reading in groups or pairs	5	1	1		1	2
Reading periods	1			1		
Reading programs	1				1	
Repetition	2		2			
Rhymes	1				1	
Safer environment	1		1			
Self-made picture books	1				1	
Sentence building	1	1				
Short comprehensions	1				1	
Sound						
Sound repetition	1	1				
Sound symbol association	2				2	
Sounding of words	3					3
Spelling games	1	1				
Symbolic systems like Bliss and Macaton	1			1		
Teacher support with forms	3				3	
Teaching games	1			1		
Teaching programs	4	1				3
Use old clothing for dress-up	1				1	
Visual arts with music	2	2				
Word recognition	3	3				
Writing on newspapers	1		1			
Writing on the wall	2					2

APPENDIX K: Categories, Sub-themes and themes

Categories	Sub-themes	Emergед themes
<ul style="list-style-type: none"> • Access to resources slows the teaching process down • Adaption to mainstream • Can analyse but they can't put it back together • Children from rural or township areas • Taught in home language • Uneducated or less educated • Children with no parents • Emotional problems • Class size not conducive to immediate support • Communication from previous teachers • Connecting visual with auditory • Curriculum is too tight for our learners • Differance in learning and teaching between township school and suburban • Individual attention - everybody stops working • Knowledge on how to use ICT's • Lack of available ICT's • Lack of psychologist at school • Language barriers 	<ul style="list-style-type: none"> • Language • Classroom situation • Teaching and learning resources 	<ul style="list-style-type: none"> • Factors affecting learners experiencing reading difficulties

<ul style="list-style-type: none"> • Children from rural areas • English not the first language • Foreign languages • Other official South-African languages • Teaching language is not mother tongue • Language used on cell phones • Late identification • Limited vocabulary • Multi-faceted challenges • Neglect • No formal remedial class in senior phase • Parental involvement and support • Passive viewing to learning viewing • Phonetics • Placing to mainstream unseccessful • Psycho-social problems • Reading matter are not differentiated • Rescources • Rudeness towards students who struggle • School does not have hall • Teachers feel constrained or helpless • Feelings of helplessness 		
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<ul style="list-style-type: none"> • Space constraints • The need is too big, too many children • Time constraints • Think in their own language • Training support for teachers on ICT's • Transport to extra classes • Understanding 		
<ul style="list-style-type: none"> • Classroom observation • Combining perceptual, visual and auditory • Develop strategy to bridge problem area • Group according to abilities • Group reading • Identify children with problems • Identify the problem • Individual attention • Pair reading • Refer to social worker • Referral to educational psychologist • Referral for remedial • Referral to professional for testing • Skill development • Communication skills • Context translation and understanding • Holding a pencil 	<ul style="list-style-type: none"> • Support inside the classroom • Support outside the classroom 	<ul style="list-style-type: none"> • Supporting learners with the reading needs

<ul style="list-style-type: none">• Listening skills• Syllabification skills• Word attack skills• Slow working pace• Support teachers to support learners• Use ICT to move focus from teacher to device• Vocabulary enhancement• Exposure to new words• Start with spelling to build vocabulary		
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APPENDIX L: Language editing Certificate.

Acknowledgment of Language Editing

Date: Wednesday, 20 November 2013

This is to certify that Language Editing has been carried out on the following:

*INFORMATION COMMUNICATION TECHNOLOGIES AS A SUPPORT MECHANISM FOR
LEARNERS EXPERIENCING READING DIFFICULTIES*

by

RAMASHEGO SHILA SHORTY MPH AHLELE

Andrew Graham (BA, MA dist., PhD, University of Keele, UK)*



Telephone: 011 475 6724
Mobile: 073 469 5014
Email: happy4andrew@hotmail.com

*Former Tutor in Postgraduate Writing Centre and Managing Editor of ISI Accredited Journal

APPENDIX M: Turnitin Report

11/22/13 Turnitin Originality Report

Turnitin Originality Report
MEd by Shila Mpahlele
From Shile Mpahlele (THESIS)

- Processed on 22-Nov-2013 11:36 SAST
- ID: 376155794
- Word Count: 54643

Similarity Index
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sources:

There are no matching sources for this report.

paper text:

INFORMATION COMMUNICATION TECHNOLOGIES AS A SUPPORT MECHANISM FOR LEARNERS EXPERIENCING READING DIFFICULTIES by RAMASHEGO SHILA SHORTY MPHABLELE submitted in accordance with the requirements for the degree of Master of Education in the subject Inclusive Education at the University of South Africa Supervisor: Prof N.M. Nel November 2013 DECLARATION Student number: 33130930 I declare that INFORMATION COMMUNICATION TECHNOLOGIES AS A SUPPORT MECHANISM FOR LEARNERS EXPERIENCING READING DIFFICULTIES is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. _____ SIGNATURE (Ms) 18 NOVEMBER 2013 DATE i DEDICATION This work is dedicated to my late grand-mother, Salome Malope Malekane who travelled to the small town of Groblersdal in 1991 to buy me a scientific calculator. She didn't know it and how to pronounce it but she came back with the right one. ii ACKNOWLEDGEMENT I am able and capable of chasing my dream because of God Almighty. I thank Him for the life, good health and the courage to go on with the studies. I would like to express my sincere appreciation and gratitude to the following: Prof Norma Nel, my supervisor, for your warm heart, patience and full time support you dedicated to me. Dr. Dan Tlale, my mentor, for your support especially during my data collection. Thank you so much. Mrs. Mubi Mavuso, my former colleague, your words of encouragement did not fall on deaf ears. My children Rocky and Toka, your quality time was shared with this study, thank you for being patient and understanding. My parents Magashe and Rebotile Mashabela, I know that every day of your lives you are praying for me to be the best daughter. My younger sisters, Shevy, Mantsie, Mmathabo, Lefa, Tshepo and Basetsana, thank you so much for your support. My Colleagues at ISS Unit Tshwane South District Office thank you for your wiliness to help always. Lastly, the SBST members and LSEs who volunteered to make this study possible and the two Principals who opened their school gates for me. Thank you very much. iii Abstract Reading Difficulties are of concern worldwide, as evidenced by a number of studies, including the Association for the Development of Education in Africa (ADEA), the Centre for Evaluation & Assessment (CEA), and Progress in International Reading Literacy (PIRLS). In South Africa's, Gauteng Province, in which this study

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